

HN10107510800

A comparative study on the concept of convulsion in traditional Iranian medicine and classic medicine

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Objectives: In this study, in order to review the semiology of traditional medicine and apply it to current medical terminology, traditional and classic medicine resources on the subject of convulsion were reviewed. The connotative meaning of the term “convulsion” in traditional medicine is “the twitch of a non-specific part of the body, prepared for an expansive movement in a consistent, rapid and involuntary manner”.

Materials and Methods: This review study was conducted by searching keywords such as “convulsion” and “fasciculation” in traditional Iranian medicine literature, i.e., Canon of Medicine, Al-Hawi, Bahr al-Jawahir and Summary of Wisdom, along with some reliable books on the nervous system (e.g., Bradley).

Results: Based on the definition of fasciculation (subcutaneous twitches, not causing joint movements around the muscle), we can parallel the concept of convulsion in traditional medicine with fasciculation. Little attention has been paid to fasciculation in classic medicine. In fact, this sign can predict some diseases only in case of consistence and occurrence alongside other symptoms (e.g., muscle atrophy). Also, no treatments have been introduced for the sole incidence of convulsions. However, in traditional medicine literature, we can find details about the causes of convulsion and its classification. In these resources, the occurrence of convulsion in each part of the body can be a sign of a specific disease. In addition, lots of treatments have been proposed for alleviating this sign.

Conclusion: As the results indicated, we can adopt the concept of convulsion in traditional medicine to fasciculation and apply the proposed treatments in traditional medicine resources.

Keywords: Fasciculation, Traditional Iranian medicine

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Effects of Citrus aurantium on the reduction of preoperative stress and anxiety in patients undergoing coronary artery bypass graft surgery

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Coronary artery disease (CAD) is one of the most important causes of death in the world. Coronary artery bypass grafting (CABG) is a surgical procedure, which reduces mortality rate among CAD patients. Although CABG is commonly performed around the world, and the overall risk of mortality has decreased relatively, many patients may experience preoperative stress and anxiety before this surgery. Several studies have indicated that stress could influence surgical outcomes, while decreasing the prognoses of CABG. Some of the complications caused by CABG are atrial fibrillation, cardiac failure, post-traumatic stress disorders and fatal cardiac arrest. One study claimed that even mild levels of stress could increase the risk of mortality about two fold after CABG. Therefore, effective methods are required as to reduce anxiety in cardiac patients. Today, preoperative methods, such as the use of anti-anxiety drugs, meditation and music, are known to reduce stress among cardiac patients; however, usual anxiety treatments may not be effective in some cases. In this regard, medicinal herbs could be used as alternative treatments due to their solid history and effective mechanisms.

Citrus aurantium (bitter orange) is a medicinal

plantused for the treatment of insomnia, urinary infections, headaches, muscular pain, nausea, vomiting and reduction of anxiety. Antioxidant and antimicrobial properties of citrus aurantium have been confirmed by several studies. The main component of the essential oil of this herb is limonene. Anti-anxiety mechanism of citrus aurantium involves the mild stimulation of β -3 adrenoceptor. In one research, this plant was reported to reduce blood pressure, heart rate and stress with its vasodepressor properties. Furthermore, Akhlaghiet al. indicated that citrus could decrease preoperative stress among different patients.

It seems that in addition to its cardiovascular effects, citrus could reduce the complications of CABG, as well as the preoperative stress and postoperative complications caused by this surgical procedure.

Keywords: Anti-anxiety, Citrus aurantium, Surgery

HN10104320297

The effect of *Hypericum perforatum* ointment (perforan) on the rate of improving episiotomy incision

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Objectives: Episiotomy is the most common incision of the perineum during vaginal delivery, which has its own risks as any other incision. One of the factors in episiotomy wound healing, that has been recently considered, is the use of medicinal plants. *Hypericum perforatum* extract inhibits protein kinase C and COX enzyme and reduces pain and inflammation. Additionally, it has been used an antiseptic for surgical wounds. Therefore, aims to determine the effect of the

perforan ointment on episiotomy wound healing. **Materials and Methods:** This clinical trial was conducted on 120 hospitalized women undergoing episiotomy. Patients were randomly divided into intervention (receiving perforan ointment) and control (receiving the placebo ointment) groups. Each group used the ointment topically three times a day for 10 days. At intervals of five and ten days following episiotomy, wound healing was measured by means of REEDA. Finally, the data were analyzed performing chi-square and independent t-test.

Results: The results showed that wound healing on the fifth day was significantly different in the two groups ($p=0.1$), but there was a statistically significant difference between the two groups on the tenth day after the intervention ($p=0.02$).

Conclusion: Based on these findings, *Hypericum perforatum* ointment could reduce pain and accelerate wound healing.

Keywords: Episiotomy, *Hypericum perforatum*, Wound healing

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Comparing the effects of hay with self-medication method in treatment of addiction

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Objectives: The ancient methods for curing addiction used drugs which could develop negative feelings in the individual about this habit. This was done by using hey stink, wormwood and several other plants, but little research was devoted to comparing these treatment methods. Therefore, the purpose of this study is to compare the treatment of addiction by hey and self-medication method.

Materials and Methods: Samples of this study included 30 patients referring to addiction clinics of Mashhad. A total of 15 patients were treated with hay, and 15 were treated with self-medication method. In this study, data were gathered using self-reporting forms. Data were analyzed performing t-test for independent

groups, using SPSS.

Results: The results of this study showed that the two groups had significant differences in terms of duration of being clean. The average time of being clean in the group treated with hay was significantly longer than the group using self-medication.

Conclusion: The findings of this study reveal the need for further reviews and comparisons of traditional methods in treatment of addiction. The results show that treatment with hay syrup is more effective than self-medication.

Keywords: Addiction treatment, Hay syrup, Self-medication, Traditional medicine

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Homeopathy in the treatment of female infertility

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Objectives: Infertility is one the most serious diseases in women around the world, and due to its emotional and social consequences, several therapeutic systems have focus their attention on this issue. Nowadays, there are numerous medicinal methods for treating this disease including drug treatment, acupuncture, traditional medicine, herbal medicine, homeopathy and reflexology, each having their own advantages and disadvantages. Homeopathy is one of the holistic treatment systems which is based on minute doses of drugs thought capable of producing in healthy people the same symptoms as those of the disease being treated. This method simultaneously affects all the physical, mental and emotional factors in curing the disease, considering the fact that all dimensions of body, soul and mind are controlled by the vital force. In this method, it is aimed to stimulate and improve the vital force of patients. The drugs used in homeopathy are mostly extracted from natural sources such as herbs, animals and minerals. The present study evaluates the effects of this treatment method and the commonly used

homeopathic drugs on infertility.

Materials and Methods: Using radar software, we were able to identify all the drugs for treating female infertility. Then, the properties and functions of those drugs were found in *Materia Medica* book and evaluated.

Results: A considerable number of homeopathy drugs can be effective on curing infertility in women. The effect of these drugs is often on the female hormonal system, but some of them have effects on uterine endometrium and implantation improvement or preventing from the incidence of ectopic pregnancy. Reducing ovarian cysts, improvement of ovulation, regulating the endocrine hormone levels, etc. are also other effects of homeopathy drugs in curing infertility in women.

Conclusion: Homeopathy is one of the sub-branches of complementary medicine, which can help with curing infertility in women. The treatment efficiency can be significantly increased through identifying this drug's advantages and its wide range of functions. In addition to introducing the features of this treatment method, the common drugs used in this method were also discussed in this study.

Keywords: Complementary medicine, Homeopathy, Infertility

HN10100660517

Application of Kunjal Kriya cleansing technique from the perspective of traditional Iranian medicine

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Objectives: There is a growing interest in

complementary therapeutic methods in different communities. As a result, use of methods resulting in successful medical outcomes should be highlighted. In this regard, we can name practical integration of medical techniques introduced in one branch of complementary medicine (i.e., Kunjal Kriya in yoga therapy) and treatment programs in other branches of complementary medicine such as traditional Iranian medicine. In this study, we attempted to evaluate the practical application of Kunjal Kriya in yoga therapy.

Materials and Methods: This review article was conducted through searching traditional Iranian medicine literature and yoga therapy resources. Finally, the collected data were analyzed.

Results: Kunjal Kriya (drinking one liter of warm saline water and vomiting on an empty stomach) is one of the cleansing methods of yoga (Shatkarma), which is mostly used for periodical cleansing of the stomach in order to maintain health or treat specific diseases (e.g., asthma and indigestion). From the perspective of traditional Iranian medicine, Kunjal Kriya is a type of vomiting that is mentioned in Iranian medicine literature as a method for disposing of the excessive phlegm in the body. The purpose of vomiting is to cleanse the stomach alone, to clean the whole body or to transfer substances to another point of the body. Regarding the advantages of vomiting, Aghili Khorasani quotes Hippocrates and claims that vomiting is effective for human health. As he states, if a person commits to this method, and avoids concentrated foods, he/she can remain healthy. Some Indian practitioners claim that this technique can prolong one's life and guarantee his/her eternal health.

Conclusion: Considering the humans' need to cleanse their body (due to lack of physical activity and consumption of foods producing phlegm) and the functionality of Kunjal Kriya in cleansing the stomach, this technique can be used as an effective method in individuals with moist temperaments.

Keywords: Kunjal Kriya, Traditional Iranian medicine, Yoga therapy, Vomiting

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The effect of Epithimum and ginkgo biloba on ADHD children based on iranian traditional medicine and complementary medicine

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Objectives: ADHD or Attention-deficit/hyperactivity disorder is a developmental behavioral disorder which is marked by unusual bodily activity, lack of concentration and impulsive behavior.

This disease is the most common behavioral disorder of children with a nervous-mental origin based on genetics and influenced by the environment.

Materials and Methods: In this study 105 children within the age range of 6 to 12 years were selected based on DSM-V criteria and divided into three groups (n=35). Members of the witness group were not treated, 35 members only received 20 mg TD Sepithimum extract for 14 days, and 35 members received 20 mg TDS epithimum extract plus 20 mg TDS Ginkgo biloba for 14 days.

Results: The first group was active without concentration, the second group experienced usual bodily activity in 10.37 of the cases, and the third group experienced usual activity with increased concentration in 13.37 of the cases.

Conclusion: Based on Iranian traditional medicine, epithimum is a potent medicine for nervous-behavioral disorders. According on supplementary medicine, Ginkgo biloba is an effective factor in improvement of brain and reduction of its functional disorders. Combination of both of these drugs was effective in up to 37% of ADHD patients

Keywords: ADHD, Epithimum, Ginkgo biloba, Iranian traditional medicine, Supplementary medicine

HN10108230910

Long history of psoriasis treatment

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Objectives: Psoriasis is a chronic inflammatory condition and autoimmune disorder. Over decades, several effective therapeutic options have been developed but treatment is often slow. The ultimate goal of psoriasis treatment is to achieve maximum efficacy with minimal side effects.

Materials and Methods: Research for the purposes of this study was accomplished by searching keywords including psoriasis, psoriasis treatment, natural medicine, and herbal medicine in databases such as ScienceDirect and PubMed, and search engines like Google Scholar. The article publication dates ranged from 2000 to 2015.

Results: Effective treatment of psoriasis depends on disease parameters such as degree of skin involvement or severity of disease and resistance to drugs. Topical drugs, phototherapy, photochemotherapy, systemic agents and biological agents will bring desirable medical responses when used under proper conditions; related studies will be discussed here.

Life-style changes like stress reduction, abstinence from smoking, discontinuing alcohol consumption and weight loss have shown some results.

This study is a complete review and categorization of drugs based on their structure and nature: chemical drugs, immunologic agents, natural vitamins and supplements and their derivatives, herbal components and finally effective herbs, which have been used in different levels of experimental and clinical studies.

Different complementary and alternative medical systems have their own special view and therefore special approaches to this disease. We have briefly reviewed approaches of the potent and well known Iranian complementary and alternative medicine called Traditional Persian Medicine (TPM) to this complicated

dermatologic problem.

Keywords: Psoriasis, Psoriasis treatment, Natural medicines, Herbal medicines

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Saffron and childbirth: a triple-blinded clinical trial

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Objectives: Childbirth is one of the most painful experiences in a woman's life. Pain relief and reducing labor time are some of the most important aspects of health care. In recent studies and traditional medicine, saffron has shown analgesic effects during labor. Therefore, the present study was conducted to determine the effects of oral saffron capsules on pain and the active phase of childbirth.

Materials and Methods: This triple-blinded clinical trial was performed on 60 eligible pregnant women at 17 Shahrivar Hospital of Mashhad, Iran in 2013-2014. The study subjects were selected via available sampling and were randomly divided into two groups: intervention (250mg saffron capsules) and control (placebo medicine) groups. After the start of the active phase of labor, one capsule was consumed by the participants. Pain severity was measured at the beginning of the study and then every one hour till the end of the active phase of labor, using a visual analogue scale. The duration of the active phase was calculated through vaginal examination by the researcher. If necessary, the use of capsules was repeated every two hours (up

to three doses) by taking the possible side-effects into account. Statistical analysis was performed using SPSS version 11.5 and descriptive and analytical tests.

Results: The mean total pain intensity in the first active phase of labor was 85.9 ± 8.4 in the saffron group and 97.4 ± 2.9 in the control group; the difference was statistically significant ($p < 0.001$). The mean length of the active phase of labor in the saffron group was shorter, compared to the control group (63.6 ± 13.8 min); the difference was significant in both groups ($p = 0.002$). Maternal and neonatal complications were not reported in any of the study samples.

Conclusion: Considering the 11.8% reduction in pain severity, reduced duration of the first active phase of labor by 63 min and lack of side-effects in the saffron group, this compound can be used as a light analgesic during labor.

Keywords: Duration of the active phase of labor, Labor pain, Pain, Saffron

HN10103970236

Prevalence of the use of Frankincense in postpartum women at maternity wards of Mashhad, Iran in 2011-2012

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Objectives: Frankincense is regarded as an effective resin in traditional and Islamic medicine for improving memory and intelligence and alleviation of amnesia and memory loss. The positive effects of frankincense, especially in pregnant women, on infant's memory have been confirmed. Hippocampus is responsible for the most important part of learning and memory in the brain. Frankincense probably affects this area and causes an increase in message

transmission and memory improvement. Considering the status of traditional and Islamic medicine recommendations in families of our society, we aimed to evaluate the status of using frankincense in pregnant women in healthcare centers of Mashhad, Iran in 2011-2012.

Materials and Methods: In this cross-sectional study, 838 postpartum women at maternity wards were interviewed. Data were analyzed using SPSS.

Results: In this study, about one-third of women had used frankincense during their pregnancies to improve the memory of their infants. In total, 38% of mothers had less than high school diploma, whereas 62% had diplomas or higher degrees. In 91% of mothers, no complications were reported after using frankincense, and only 9% of mothers had nausea, dizziness and slight side-effects.

Conclusion: Today, the use of traditional herbs has become more common due to various reasons. Considering the positive effects of memory in life, further research in this area is recommended to determine the effects of frankincense on the memory of infants born to mothers consuming frankincense.

Keywords: Frankincense, Medicinal Herbs, Women

HN10102410100

Effects of hollyhock leaves compress with cold and hot compress on breast congestion in lactating women

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Objectives: Breast congestion is a common problem affecting 40% of mothers after delivery and has adverse effects on proper breastfeeding. This study aimed to identify the effects of the local use of Hollyhock leaves compress with cold and hot compress on breast congestion in breastfeeding women.

Materials and Methods: This clinical trial was conducted on 40 women in Abolfazl Hospital of

Kashmar, Iran. Subjects were randomly divided into two groups of control and intervention. Severity of congestion was evaluated by determining the total scores for symptoms such as redness, tension and pain. Intervention in the control group included hot compress before breastfeeding and cold compress after breastfeeding. In the intervention group, in addition to hot and cold compress, Hollyhock leaves compress was used. Data analysis was performed using generalized estimating equation (GEE) in SPSS.

Results: In this study, both groups were homogeneous in terms of age, time of the onset of congestion, education status, occupation and type of delivery. Severity of congestion was on a downward trend during intervention in both groups, while the effects of intervention group on the total score of breast congestion was statistically significant ($p < 0.001$). In addition, average breast congestion score of control subjects was 4.103, which was higher than the score in the intervention group. Also, time had a significant effect on the congestion score ($p < 0.001$); in other words, congestion score saw a reduction with time.

Conclusion: According to the results of this study, hot and cold compress alone and along with Hollyhock leaves had significant effects on breast congestion, while using Hollyhock leaves compress resulted in the rapid improvement of breast congestion.

Keywords: Hot and cold compress, Hollyhock compress, Breast congestion

HN10103730356

Evaluation of the antimicrobial activity of aqueous and alcoholic extracts of saffron stigma on oral pathogenic microbes (*Streptococcus mutans*, *Lactobacillus*, *Candida albicans*)

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Objectives: Due to the growing prevalence of dental caries in the public, it seems appropriate to pay careful attention to prevention and treatment methods. Microbes, especially *Streptococcus mutans*, have an important role in initiating dental caries, which are followed by increased lactobacilli and fungi populations. Using antimicrobial agents, antibiotics, and commercial antimicrobial mouthwashes is effective, yet has complications. Therefore, using an herbal medicine with antimicrobial, anti-inflammatory and analgesic effects and no side effects seems reasonable. Since saffron is a native herb and easy to find, we decided to evaluate effects of its aqueous and alcoholic extracts on oral microbes.

Materials and Methods: Six first-grade boys without a history of systemic diseases were selected from an elementary school; dental plaque was sampled to investigate *Streptococcus mutans*, saliva was sampled to assess *Candida albicans*, and depths of dental caries were sampled to reach Lactobacilli. Samples were sent to the lab in less than an hour; subsequently separation phases were performed through successive dilutions.

Aqueous and alcoholic extracts of saffron were obtained. One standard antimicrobial and antifungal antibiotic was also evaluated in order to compare its effects with the effects of aqueous and alcoholic extracts. The analysis method of this study was mean \pm average standard error. Unpaired t-test with Welch's correction was used to compare the two groups. $p < 0.05$ was considered as significant difference.

Results: The results of this study showed that aqueous and alcoholic extracts have inhibiting and killing effects on all three microbes. Even though their efficacy was less than standard antimicrobial and antifungal antibiotics in the studied densities, it may be possible to suggest them as a kind of mouthwash due to fewer side effects and anti-inflammatory and analgesic effects.

Conclusion: The results of this study suggest that saffron, either in the form of an alcoholic extract or an aqueous one, has bacteriostatic effects on *Streptococcus mutans*

and lactobacillus and fungicidal effects on *Candida albicans*.

Keywords: Extract, Saffron, Antimicrobial, Oral pathogenic microbes

HN10104570827

Management of the effects of mind perturbation on infertile couples in the perspective of Iranian traditional medicine

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Objectives: Infertility and its management are associated with multiple mental complications, and some of these complications could negatively affect infertility. Infertility induces considerable stress in patients, and this stress could deteriorate infertility.

Materials and Methods: Reliable and available references of the Iranian Traditional Medicine (ITM) have specific and remarkable clarifications on the effects of mind perturbation on infertile couples. This study aimed to review a number of ITM references, such as Qanoon-fil-Tib, Kamal-al-Sanaeh, Tib-e-Akbari, Akseer-e-Azam and Zakhire Kharazmshahi in order to explore their views regarding the association between infertility and stress.

Results: According to the literature, ITM clearly points out the pivotal role of stress in infertility. Furthermore, there are sections on the effects of stress on different body organs, including the brain, heart, liver, kidneys, uterus and sexual glands. All these organs are involved in the process of fertility, and infertility is considered as a significant consequence of stress.

Conclusion: Use of various tonics and adherence to specific diets have been strongly recommended by ITM scholars in order to reformat the associated body organs, diminish their responses to stressful stimuli and improve the success rate of infertility management.

Keywords: Traditional Medicine, Infertility, Mind Perturbation

HN10106610579

The effect of sodium molybdate on cholestatic liver fibrosis in a rat model of bile duct ligation

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Objectives: Fibrosis is a major disorder in chronic liver diseases. Bile duct ligation model is an experimental model suitable for improving cholestatic liver fibrosis in lab animals. Nowadays, due to prevalence of liver diseases, there is a need for natural supplements alongside drug treatments. Molybdenum is an essential rare element found in some beans, grains and oilseeds, and acts as a cofactor in the structure of detoxification system enzymes. The purpose of this study was evaluation of the anti-fibrosis effects of sodium molybdate in bile duct ligation of rats.

Materials and Methods: After bile duct ligation, animals received sodium molybdate (0.05 or 0.1 or 0.2 gr/kg) or ursodeoxycholic acid (UDCA, standard drug) orally for 45 consecutive days.

Results: Trichrome stain based histopathology on animals with cholestatic liver fibrosis showed considerable tissue damage in the form of collagen deposition, infiltration of inflammatory cells, necrosis, and bile duct hyperplasia. These disorders were significantly improved by treating with sodium molybdate (0.1 and 0.2 gr/kg); the therapeutic effect of sodium molybdate (0.2 gr/kg) was even more than UDCA.

Conclusion: The results of this study show anti-fibrosis effects of sodium molybdate on a cholestatic liver. Sodium molybdate can prevent the penetration of fibrosis in the liver tissues by inhibiting the activation of star cells, and production of extracellular matrix proteins

and collagen. It may be possible to use sodium molybdate as an anti-liver-fibrosis supplement in addition to the main drugs in the future.

Keywords: Bile duct ligation, Cholestatic liver fibrosis, Collagen, Rat, Sodium molybdate

HN10109281069

Evaluation of the effects of aloe vera extracts on depression in pre-diabetic patients: a double-blinded randomized clinical trial

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Objectives: Pre-diabetes is a growing concern in patients at risk of type II diabetes. Considering the associated complications of common treatments, it is considerably important to find natural treatments. A great deal of attention is being paid to medicinal herbs. Aloe vera is taken into consideration due to its significant medicinal effects. The purpose of this study was to determine the effects of different doses of aloe vera extracts on mild depression in pre-diabetic patients.

Materials and Methods: This double-blinded randomized clinical trial was conducted on 72 pre-diabetic patients. After explaining the study procedures and obtaining informed consents by the researcher, patients were randomly divided via blocking method into three groups: two treatment groups receiving aloe vera capsules (300 and 500 ml) and a placebo group. These patients received two aloe vera capsules in the morning and at night for eight weeks. Blood samples were collected to estimate the mean glucose and lipid levels at the beginning of the study and after eight weeks. Also, the standard Beck's depression questionnaire was completed by the participants before the intervention and after eight weeks.

Results: The paired t-test results showed a statistically significant difference in the mean depression score only in the group receiving 500

ml aloe vera capsules in the eighth week after the intervention, compared to the control group.

Conclusion: Consumption of aloe vera extracts by patients with pre-diabetes symptoms could significantly decrease the symptoms of mild depression during eight weeks.

Keywords: Aloe vera, Depression, Pre-diabetes, Herbal medicine, Standard Beck's depression questionnaire

HN10105890464

An evidence-based study on medicinal herbs with wound healing properties in pemphigus vulgaris: the viewpoint of traditional Iranian medicine

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Objectives: Pemphigus vulgaris is a rare autoimmune disease with poor prognosis and risk of mortality. No proper medical interventions have been proposed for this blistering disease, which involves both the skin and mucous membranes. Skin lesions are one of the most important sources of infection. Use of local treatments can decrease the healing time of lesions and reduce the need for high doses of drugs. Apart from conventional therapeutic approaches, traditional Iranian medicine may be of great benefit for the treatment of this condition.

Accordingly, major clinical and pharmaceutical textbooks of traditional Iranian medicine, focusing on skin diseases and respective herbal remedies for inflamed skin and ulcers, were studied in this paper.

Material and Methods: Scientific databases including PubMed, Science Direct, Scopus and Google Scholar were searched for finding pharmacological evidence on the use of medicinal herbs.

Results: The term “hot ulcer” was found connotatively close to what is now known as “Pemphigus vulgaris”. The reported medicinal herbs possessed anti-inflammatory, antioxidant and wound healing properties, as well as antibacterial and antifungal activities mentioned in recent studies. Therefore, they can be introduced as natural remedies for Pemphigus vulgaris.

Conclusion: Review of traditional remedies for hot ulcers in Iranian medical and pharmaceutical literature may open new horizons for the topical treatment of this disease.

Keywords: Pemphigus vulgaris, Traditional Iranian medicine, Wound healing

HN1010

The frequency of employing complementary and traditional medicine in one of the hospitals of Mashhad

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Objectives: In the recent years, psychotherapeutic approaches, known as complementary therapies or complementary medicine, have attracted patients' and health officials' attention alike. This study aims to determine the frequency of employing alternative medicine and traditional methods of pain relief.

Materials and Methods: This cross-sectional descriptive study was performed on 200 patients

from 2014 up to present, in one of the hospitals of Mashhad. The questionnaire's reliability and validity were confirmed prior to conducting the pilot study. Moreover, 42.7% and 57.3% of the subjects were male and female, respectively.

Results: This study investigated the frequency of applying different methods of complementary medicine and the most common diseases which are treated by these methods, during the previous year. Studies showed that the most diseases treated by cupping method are: coagulation disorders (increased blood concentration), acne and other skin diseases, back pain and other musculoskeletal disorders. Orthopedics and leeches are mostly used for dislocations, fractures, back pain and liver diseases. Additionally, it was found that traditional complementary medicine is often used for treating and preventing musculoskeletal disorders and mental health problems (e.g., migraine and anxiety). Hence, due to the high prevalence of these diseases in the society the data were justified.

Conclusion: Given the widespread usage of complementary medicine and its administration by untrained individuals, it seems necessary to train the public and educate more competent skilled people for providing safer and more effective complementary and traditional medicine services.

Keywords: Complementary medicine, Frequency, Group, Individual

HN10100830075

A clinical trial study of evaluating the gold facial cosmetic acupuncture techniques for facial skin rejuvenation

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Objectives: Due to the global aging problem, various methods have been devised for skin rejuvenation in the recent years, which are different in terms of efficiency, cost-effectiveness and success rate. The aim of this study was to evaluate the effectiveness of acupuncture techniques through the use of gold facial

cosmetic acupuncture technique in rejuvenation of skin and treating wrinkles and sagging.

Materials and Methods: In this study, a total of 20000 women aged between 30 and 70 years, who referred to the acupuncture clinics for skin rejuvenation during 1999-2015, were enrolled. The participants received 24 sessions of acupuncture by gold facial cosmetic technique in order to achieve skin rejuvenation.

Results: The results showed that 80% of the patients in the first 3 sessions demonstrated evidence of a clearer skin color, and at the end of the 7th session, by increasing skin elasticity, the lifting process had begun. Patient satisfaction was reported to be 90%, they also admitted that in addition to attaining a younger skin the method had been effective in improving freckles and double chin. Moreover, improved sleep quality and mood elevation were also reported by the patients.

Conclusion: Gold facial cosmetic acupuncture method was effective in treatment of wrinkles and skin sagging. In addition to being long-lasting and cost-effective, it is quite natural and has no side effects.

Keywords: Acupuncture, Face-lifting, Rejuvenation, Wrinkle

HN10100960048

Dietary flavonoids as a complementary strategy in oral cancer prevention

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Epidemiological studies have consistently shown an inverse association between consumption of vegetables and fruits and the risk of human cancers. There are numerous plausible mechanisms by which intake of vegetables and fruits may prevent carcinogenesis. Plant foods contain a wide variety of anticancer phytochemicals with many

potential bioactivities reducing cancer susceptibility. Flavonoids are especially promising candidates for cancer prevention. In recent years, considerable attention has been paid to their abilities to inhibit the cell cycle, cell proliferation, oxidative stress and to induce apoptosis and the immune system. Dietary flavonoids, combined with other components such as various vitamins, lycopene and carotenoids play a significant role in cancer prevention. This review summarizes the potential cancer preventive effects of dietary flavonoids as a complementary method for cancer treatment.

Keywords: Oral cancer, Nutrition, Prevention

HN10104311021

A review on the comprehensive etiology of depression from the perspective of traditional persian medicine

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Objectives: Although the term “depression” has not been literally discussed in the Persian medical manuscripts, it could be matched with a variety of disorders described in those texts. The popular approach to etiology and management of depression among the untaught traditional practitioners is often based on a reductionistic method which counts depression merely as the outcome of humoral imbalances especially melancholic dystemperament, and consequently leads to improper handling of depression. This study aimed to analyze this approach critically and investigate the etiology of depression from the perspective of Persian medicine.

Materials and Methods: In this review, the reliable manuscripts of Persian medicine searched for statements in relation to depression. Then the textual findings analyzed, categorized and interpreted according to match depression and its bio-psychological causes comparatively.

Results: According to the literature of Persian medicine, depression could be caused by several factors. Somatic-derived types of Depression could be caused primarily by organic dystemperaments especially in heart and brain,

or might be due to quantitative/ qualitative/ substantial changes in humors or in subtle bodily structures called medical spirits. Also, depression might be secondary to temperamental or structural disorders in organs such as uterus, intestines and visceral membranes.

Conclusion: According to the results of this study, depression can be caused by a wide range of corporal disorders. Contrary to the common misunderstanding, depression is not always due to the melancholic dystemperament. Therefore, comprehensive recognition of the etiology of depression is necessary for accurate diagnosis and proper medical handling through natural cures.

Keywords: Depression, Dystemperament, Heart, Brain, Melancholy, grief

HN10108130855

Management of somatic sensory disorders in traditional Iranian medicine and conventional medicine

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Objectives: In this study, the definition, causes, symptoms and treatment of somatic sensory disorder (SSD) were reviewed in classic and traditional Iranian medicine resources, regardless of the details.

Materials and Methods: In this study, we reviewed traditional Iranian medicine literature including the “Canon of Medicine” (Avicenna, 11th century), “Zakhira Khawrazmshahi” (Jorjani, 12th century), “Khulasatul-Hikmah” (Aghili, 18th century), “Exir-e-A’zam” (Chisti, 19th century) and “Teb-e-Akbari” (Arzani, 18th century). Also, conventional medicine resources by Aminoff and Harrison, as well as electronic databases such as PubMed and Scopus, were

searched.

Results: SSD refers to the total or partial loss of sensation. Cold and/or dry dystemperament, changes in the quantity and quality of phlegm and pressure or trauma to the nerves have been introduced as the etiologies of SSD in traditional Iranian medicine. In conventional medicine, these factors include nerve lesions, polyneuropathies (e.g., inflammation, vasculitis, infection, granulomatous disease, neoplastic and paraneoplastic metabolic diseases, induction by nutrition, drugs and toxins and hereditary factors), entrapment neuropathies, root and plexus lesions, myelopathies, cerebral disease and pain syndrome. Signs and symptoms of SSD in traditional Iranian and conventional medicine vary according to the location of the lesion; most of the similarities are observed in spinal lesions and peripheral nerves. The treatment includes lifestyle improvements, medicinal treatments, manipulative activities in traditional Iranian medicine and nursing, symptomatic treatments, use of sedatives, steroids and vitamin supplements and surgery in conventional medicine.

Conclusion: Regarding the similarities in the definition, causes and symptoms of SSD in traditional Iranian and conventional medicine, we suggest further clinical trials to find novel therapeutic protocols.

Keywords: Khadder, Somatic sensory disorder, Treatment

HN10104311041

The biological basis of personality from the perspective of traditional Iranian medicine physicians

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Objectives: Today, personality is a result of interaction between bio-hereditary factors and

various environmental parameters. In modern days, the biological basis of personality has been the focus of attention by several psychologists. In Iranian medicine literature, psychological functions in health and illness can be explained by environmental factors such as climate conditions, nutrition, individual temperaments and some body parts such as the heart and brain. This study aimed to analyze the impact of bio-physical factors on perception and behavior from the perspective of traditional medicine physicians and reach an integrative understanding of personality in modern psychology by delving into typological and biological theories.

Materials and Methods: In this review article, different aspects of the effects of bio-physical matters on mental functions were reviewed from the perspective of traditional medicine practitioners. The findings were then compared with the theories of contemporary psychologists such as Kretschmer, Sheldon, Eysenck and Cloninger.

Results: According to the theories proposed by Sheldon and Kretschmer, there is a correlation between physical appearance, behavioral disorders and personal orientations. According to Eysenck's theory, fundamental factors of personality have strong biological determinants, and bio-genetic factors shape one's personality. Based on the theory of Kretschmer, who was one of the critics of Eysenck, the four-dimensional model of psychological nature is consistent with the ancient Hippocratic model of temperaments. Iranian philosophers also found the influence of biological and physical matters on intellectual, emotional and behavioral properties and treated various mental and behavioral disorders by applying a medicinal approach.

Conclusion: Physical-mental properties are comprised of organic structures, physiological functions, mental interactions and personality traits. To the best of our knowledge, one of the most important biological bases of personality is an individual's inborn temperament, upon which one's personality pattern can be adjusted. However, it should be mentioned that other factors such as external non-biological factors can also affect the formation of physical and mental properties of an individual.

Keywords: Body and soul, Nature, Personality, Temperament

HN10109211064

Evaluation of the knowledge and attitude of Mashhad medical students towards traditional Iranian medicine

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Objectives: Traditional Iranian medicine is one of the major parts of complementary medicine. Since drug treatments are accompanied by various complications in some cases, use of traditional medicine has increased. However, since no attention has been paid to complementary medicine at medical universities, most components of this branch are unknown to physicians. Therefore, this study was conducted to evaluate the knowledge and attitude of medical students towards different components of traditional Iranian medicine and to determine the necessity of training on its principles in general medical courses.

Materials and Methods: This descriptive, cross-sectional study was conducted on 105 medical students (students of basic sciences, physiotherapy, stager and internship). For data collection, a researcher-made questionnaire was applied. Its reliability was confirmed by researchers and its validity was approved by Cronbach's alpha. Data were analyzed, using SPSS version 19.

Results: In this study, 27.6% of subjects were male. Overall, 79.6% of students were informed about the basics of traditional Iranian medicine. According to the results, 48.5% of subjects considered their knowledge to be insufficient. Overall, 5.7% of subjects had passed some courses in traditional medicine. The highest levels of knowledge were reported in herbal treatments (87.9%), bloodletting (83.8%) and

leech therapy (75.2%), respectively. In total, 53.8% had a positive attitude towards traditional medicine and recommended it to others. Meanwhile, 77.9% of subjects considered training to be profitable in medical education.

Conclusion: Based on the findings of this study, the prevalence of the use of traditional medicine in our country was at a moderate level and the knowledge of medical students was low. Moreover, there was an inclination towards teaching traditional medicine in medical courses. Therefore, it is suggested to teach the basics of traditional medicine in medical courses.

Keywords: Attitude, Knowledge, Teaching, Traditional Iranian medicine

HN10103590193

The effects of licorice and exercise on quality of life in postmenopausal women

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Objectives: Menopause is a stage of women's life that can be accompanied with mental and physical symptoms affecting their quality of life. Nowadays it is recommended to pay more attention to behavioral approaches such as exercise programs and herbal treatments so as to prevent the complications of hormone therapy. Therefore, this study aims to compare the effects of exercise and licorice consumption on the postmenopausal women's life quality.

Materials and Methods: This clinical trial was done between Mehr and Esfand of 1393 in Arastoo Clinic of Arak. The participants were 60 menopausal women eligible to enter the study, who were randomly divided into two groups of 30. The first group received three pills of licorice three times a day (morning, noon and night) on

a daily basis for one month. The second group had exercise programs, which contained regular walking three times a week, each time 30-45 minutes for one month. Then, their quality of life was evaluated using Menopause Quality of Life Questionnaire before and one month after the intervention. Data were analyzed performing Chi-square, ANOVA and Mann-Whitney tests, using SPSS, version 16.

Results: The findings of this study showed that there was no statistically significant difference between the two groups regarding the vasomotor psychosocial, physical, sexual and overall life quality and the mean of change was $13.963.31 \pm$ before intervention. Moreover, one month after the intervention, no significant difference between the two groups regarding the vasomotor psychosocial, physical, sexual and overall life quality was observed.

Conclusion: According to the results of this study, it seems that consuming licorice and doing exercise are effective in controlling the complications of menopause. Thus, they can be mentioned as proper solutions in improving the quality of life in menopausal women in health and educational interventions.

Keywords: Exercise, Licorice, Menopause, Quality of life

HN10104100274

Evaluation of the antioxidant activity of berberis vulgaris juice on the production of free radicals and inhibition of DNA fragmentation

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Objectives: Various studies on animal models and human subjects have confirmed the protective role of antioxidants against oxidative stress and free radical damage. Fruits are considered as a natural source of antioxidants consisting of anthocyanins and polyphenolic compounds, which can reduce the risk of disorders caused by oxidative stress such as neurological disorders, cancer, diabetes mellitus and cardiovascular

diseases. The aim of this study was to evaluate the antioxidant activity of barberry juice against the production of free radicals, which cause DNA fragmentation and possess carcinogenetic effects.

Materials and Methods: In this study, the antioxidant activity of barberry juice (Ghaen Sereshk Company, Khorasan, Iran) against DNA damage was examined. Considering the condensation of the sample in the production process, first, a 1:5 dilution of barberry juice was prepared, and then, 1:100, 1:50, 1:25 and 1.12:5 dilutions were obtained for the suppression of fenton digestion on DNA, extracted from healthy blood samples and plasmid PBR322. Prevention of DNA damage was determined by polymerase chain reaction method and gel electrophoresis, using GelQuant Net software.

Results: According to the results, 1:25 and 1:100 dilutions of barberry juice were most effective for the prevention of genomic DNA and plasmid PBR322 fragmentation and, respectively.

Conclusion: The results indicated that the antioxidant activity of barberry juice can inhibit the production of free radicals and DNA fragmentation. It is suggested that the antioxidant activity of other fruits and plants, especially medicinal plants, be further examined.

Keywords: Antioxidant activity, Barberry juice, Free radicals, DNA fragmentation, Fenton reaction

HN10105050360

The effects of *Gum Olibanum* complementary medicine on the treatment of diabetic patients

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Objectives: Diabetes is a common metabolic disease with various adverse consequences. *Gum olibanum* (from trees of the genus *Boswellia*) has been traditionally used for the treatment of

various diseases such as diabetes. The aim of this study was to compare the effects of *Gum olibanum* powder and placebo on the treatment of type II diabetes.

Materials and Methods: The inclusion criterion was having diabetes, with a fasting blood sugar (FBS) level of 140-200 mg/dL. This double-blinded clinical trial was conducted on 71 patients with type II diabetes, who were randomly divided into intervention and placebo groups. Patients on standard anti-diabetic therapy (metformin) were treated with *Gum olibanum* (400 mg capsules) and placebo twice per day for 12 weeks, respectively. FBS, HbA1c, insulin, total cholesterol, low-density lipoprotein (LDL), triglyceride and high-density lipoprotein (HDL) were measured.

Results: *Gum olibanum* significantly lowered FBS, HbA1c, insulin, cholesterol, LDL and triglyceride levels ($p < 0.001$, $p < 0.001$, $p < 0.001$, $p = 0.003$, $p < 0.001$ and $p < 0.001$, respectively), without having any significant effects on other serum lipid levels. Liver/kidney function test results were not significantly different between the groups at the end of the intervention ($p > 0.05$). Moreover, this plant showed antioxidant properties and no adverse effects.

Conclusion: The results suggest that *Gum olibanum* powder could be used as a safe anti-oxidant, anti-hyperglycemic and anti-hyperlipidemic agent for type II diabetic patients.

Keywords: Complementary medicine, Diabetic patients, *Gum olibanum*

HN10105050361

Scrophularia striata with anti-inflammatory and neuroprotective properties

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Objectives: In this study, the neuroprotective

effects of extracts from *Scrophularia striata*, a medicinal plant growing in Northeastern Iran, against neurocytotoxicity induced by oxidative stress were evaluated in PC-12 cell line.

Materials and Methods: Different concentrations (10, 50, 100 and 200 µg/ml) of the extracts were injected in the PC-12 cell line and then the cells were treated with H₂O₂ to induce oxidative stress and neurotoxicity. Survival of the cells, reactive oxygen species (ROS) production and apoptosis were measured, using MTT assay, fluorescent probe, 2', 7'-dichlorofluorescein diacetate (DCFH-DA) and annexin V/propidium iodide, respectively. Moreover, 2,2-diphenyl-1-picrylhydrazyl (DPPH) was used to evaluate the antioxidant capacity of plant extracts.

Results: Phytochemical assay by thin-layer chromatography showed that components such as phenolic compounds, phenylpropanoids and flavonoids can be found in *S. striata* extracts. The extracts at concentrations of 50-200 µg/ml protected PC-12 cells from H₂O₂-induced toxicity. The survival of the cells at an extract concentration of 200 µg/ml was 64%, compared to 48% survival in cells treated by only H₂O₂ (p<0.001). Moreover, the extracts showed anti-oxidative properties and decreased the number of apoptotic cells.

Conclusion: Overall, these finding indicated the ability of *S. striata* in reducing ROS production and cell apoptosis. Additionally, the presence of neuroprotective agents in this plant was suggested.

Keywords: Apoptosis; Medicinal Plant, Neuroprotective, Oxidative stress, *Scrophularia striata*

HN10100890027

Approach of the Health System towards Complementary and Alternative Medicine

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During the past two decades, several nations

have emphasized the reuse of traditional medicine approaches, and the World Health Organization (WHO) has recently attempted to revive traditional medicine in different regions of the world. Therefore, different countries should practice the medical approaches that are in accordance with their culture. Considering its rich scientific resources, as well as the remarkable compliance with the orders of Islam, the Holy Prophet (PBUH), and the Imams, Iranian traditional medicine has always drawn the attention of medical experts and ordinary people. Application of the Iranian traditional medicine is extremely beneficial in upgrading the scientific progress of human knowledge and expanding the horizons of medical practice. To do so, the guidelines of Iranian traditional medicine need to be organized, and centralized training should be provided in this field with the educational content designed based on reliable scientific evidence in order to justify the academia and prevent possible misuses. In this regard, effective measures have been taken by medical experts, including the formation of the Traditional and Complementary Medicine Education Council Secretariat at the Ministry of Health and Headquarters of Medical Herbs, as well as the establishment of the University of Traditional Medicine in Iran. The secretariat is responsible for designing programs to supply the required work force in the field of traditional medicine, which will result in operationalizing the guidelines of Iranian traditional medicine through developing educational curricula for master and doctoral courses. This study aimed to familiarize medical experts with the common principles and methods of prevention, treatment, education and applied research in the Iranian traditional medicine in order to use the most advanced classical medical information and provide, restore and promote the health of patients and community.

Keywords: Complementary medicine, Alternative medicine, Traditional medicine, Health system

HN10103420263

A new method to control pain in children without medication

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Objectives: Given the advances in invasive diagnostic and therapeutic procedures, pain has become an inevitable outcome of medical interventions. Considering the undesirable consequences of pain, medical experts are searching for new strategies to control and reduce the pain in different patients. Use of non-pharmacological pain management method has drawn the attention of researchers due to the limited side effects. This study aimed to determine the effects of watching animation on reduction of pain caused by venipuncture in children.

Materials and Methods: This clinical trial was conducted on 84 children aged 6-12 years, randomly selected and divided into two groups of intervention and control. In intervention group, 3D glasses with audio and video playback were used to display animation films during venipuncture, and pain intensity was measured in the subjects. In control group, the intervention was performed in similar stages without animation playback. Data were analyzed using descriptive statistics, T-test, Chi-square test and Mann-Whitney test in SPSS V.22, and $p=0.05$ was considered significant.

Results: In this study, the groups were identical in terms of age, gender, birth rate and ethnicity ($p>0.05$). Mean of pain intensity in intervention and control subjects was 37.35 and 47.65, respectively, which was indicative of lower pain intensity in the intervention group ($p=0.045$).

Conclusion: According to the results of this study, use of animation playback could lead to the significant pain reduction and comfort of the patients.

Keywords: Non-pharmacological therapy, Pain management, Children

HN10104800586

Strategies for the integration of traditional Iranian medicine and traditional Chinese medicine from the perspective of Chinese medicine specialists

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Objectives: Traditional Chinese medicine (TCM) by applying scientific methodology and evidence-based practice has been supported by the World Health Organization, especially in terms of acupuncture. Therefore, review of the opinions of TCM specialists and their experiences can promote evidence-based practice in traditional Iranian medicine (TIM).

Materials and Methods: TIM was briefly introduced to 16 TCM specialists at Beijing University of Chinese Medicine. Their comments were collected and summarized, using Delphi method.

Results: From the perspective of TCMs specialists, the most important strategies to integrate TCM and TIM are as follows: 1) English translation of Iranian medical books for practitioners abroad and promoting further research on the introduced subjects; 2) implementation of joint research projects; 3) exchange of specialists and students for short educational courses to promote familiarization with TCM and TIM and exchange experiences; and 4) holding joint conferences.

Conclusion: Integration of TIM and TCM can be beneficial for the promotion of the scientific basis of these medical practices.

Keywords: Traditional Chinese medicine, Traditional Iranian medicine

HN10104800576

Acupuncture effect on salivary PH in Bell's palsy patients

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Objectives: Bell's palsy is an acute paralysis in one or both sides of the face caused by facial nerve damage due to inflammation; salivary PH can be a good marker for its prognosis. Although Bell's palsy can be self-limited, various treatments such as acupuncture are suggested to reduce sequels.

Materials and Methods: 19 patients with Bell's palsy in acupuncture clinic of the Dongzhimen hospital in Beijing (China) took part in the self-controlled sequential clinical trial. A dentist and a medical doctor visited patients and evaluated their House-Brackmann Score (HBS), and a laboratory technician assessed the salivary PH before performing acupuncture and after first and final sessions of acupuncture treatment.

Results: There was no significant difference in PH before treatment and after first session of treatment ($t=-1$, $p=0.32$). After acupuncture treatment course, Wilcoxon test showed a significant increase in PH ($z=-4.45$, $p<0.05$) and a decline in HBS score compared to prior to treatment ($p<0.01$, $z=-4.81$).

Conclusion: Although salivary PH and HBS did not change after first session of acupuncture, after completion of treatment course of acupuncture, salivary PH increased and House-Brackmann Score decreased.

Keywords: Bell's palsy, Salivary PH, Acupuncture, House-Brackmann Score

HN10104800578

Effects of acupuncture on pain relief in patients with knee osteoarthritis

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Objectives: Although many patients with knee osteoarthritis use nonsteroidal anti-inflammatory drugs (NSAIDs) for pain relief,

there is still the need for more effective drugs to reduce pain among these patients. Therefore, clinicians prescribe these patients with other agents, without discontinuing NSAIDs. As a complementary approach, acupuncture has been widely used to reduce chronic pain in knee osteoarthritis patients in China.

Materials and Methods: In this study, 65 elderly adults (≥ 65 years) with persistent knee pain due to osteoarthritis were randomly divided into two groups of routine acupuncture (treatment) and sham acupuncture (control). Subjects in the acupuncture group received treatment via needling of the standard acupoints, and the control group received sham acupuncture. Intervention was performed two times per week for 3 weeks, along with the administration of NSAIDs. In addition, the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scores were determined before and after the intervention in both groups.

Results: Subjects of control and acupuncture groups had remarkable pain reduction (20% and 50%, respectively) and the difference between the two groups was significant after the treatment ($p=0.023$, $Z=-2.269$).

Conclusion: According to the results of this study, acupuncture could be used as an effective complementary approach to reduce pain in patients with knee osteoarthritis.

Keywords: Acupuncture, Knee pain, Osteoarthritis

HN10108020826

Nutrition in infertile women from the perspective of traditional Iranian medicine

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Objectives: More than half of all cases of infertility are a result of female conditions. Nutrition plays a significant role in the treatment of infertility. There are various resources in Traditional Iranian Medicine, emphasizing the role of proper nutrition in the prevention and treatment of conditions such as infertility.

Materials and Methods: In this qualitative review study, data related to the subject under study were extracted from original TIM resources, written between 815 and 1901.

Results: Dietary recommendations for infertile women vary depending on the cause of infertility. However, effective humor-producing foods are recommended in all cases. According to the classification of Traditional Iranian Medicine, in case of distemperment, use of foods intriguing the opposite temperament and avoiding excessive consumption of compatible foods are recommended. Moreover, “softening foods” in case of thick humor, “deobstructing foods” for anatomic abnormalities and uterine- tonic foods in case of weakened uterus have also been suggested. Additionally, in case of strong winds, foods with reducing effects have been recommended. Weight balance by changing the quantity and quality of foods is essential, and more attention should be paid to an individual’s psychological and behavioral status, as well as the health of his/her main body organs (e.g., heart, liver and brain).

Conclusion: Considering the importance of nutrition in infertile women, diets proposed by traditional Iranian medicine can be beneficial for the prevention and treatment of various conditions.

Keywords: Infertile women, Nutrition, Medicine, Traditional

HN10106240500

Investigation of flaws and fraud in apothecaries of Isfahan in 2007–2012

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Objectives: The supply of medicinal plants is a respectable profession; however, due to greed, prevalence of fraud is considerable. Disregard for hygiene and responsible treatment in apothecaries needs attention since it endangers public health. This study aimed to investigate the complaints and inspection checklists of apothecaries to study the extent of fraud and flaws in this guild.

Materials and Methods: In this retrospective descriptive study, all records and checklists of Food and Drug Administration and legal unit of Deputy of Treatment in Isfahan, Iran were evaluated and all data on types of flaws, frauds, professional attributes of apothecarists, rulings on records, etc. dated 2007–2012, were classified and recorded. Data was analyzed using the SPSS software.

Results: Results of this study show that most complaints were related to misleading and interference of the apothecarist in conventional treatment (approximately 77%). Most frauds were related to manufacturing custom capsules and creams, distribution of dietary supplements, anti-addiction medications, and especially weight loss and weight gain drugs. Furthermore, supply of imported, counterfeit and smuggled soaps, gels, creams, shampoos, face masks, vaginal creams, honey, and saffron and banned drinks were repeatedly reported by inspectors. Purchase and sale of ethanol by apothecaries is illegal, however its sales was reported in 18% of the apothecaries. Due to poor storage, packaging and maintenance of plants or lack of knowledge about types of plants, plant parts and their medicinal properties, in some cases, herbs are wrongly prescribed leading to serious side effects, which account for 38% of the cases.

Conclusion: Restrictions, license revocation, notarized commitment, and reference to revolutionary courts, suspension, etc. (upon observed and reported cases) have improved the state of apothecaries and reduced fraud in recent years.

Keywords: Grocery, Medicinal plants, Error, Fraud

HN10108100845

Preparation and study of the effects of a topical ointment containing goat fat and *Pistacia atlantica* extract on skin full-thickness wound healing in an animal model

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Objectives: This study was undertaken to evaluate the microscopic and macroscopic effects of an ointment containing goat fat and *Pistacia atlantica* (mastic) on cutaneous wound healing in rats.

Materials and Methods: Full-thickness excision wounds were made on the back of 75 male rats, which were anesthetized with ketamine and divided into five groups: 1) normal saline, 2) oil of goat fat, 3) mastic, 4) mastic-goat fat with a ratio of 1:3, and 5) mastic-goat fat with a ratio of 1:6. The prepared ointments were topically applied on the wounds once a day and assessed within 3, 7 and 14 days. Wounds were imaged on days 0, 1, 2, 3, 5, 7, 9, 11, 13 and 14. Wound contraction was measured, using the image analysis software. Biopsy samples were obtained on days 3, 7 and 14 for histopathological evaluation. In microscopic examination, re-epithelialization, granulation tissue formation, inflammatory response and fibrotic tissue

formation were evaluated. Data comparison was performed, using Kruskal-Wallis and Mann-Whitney U test.

Results: The treated animals in groups 3, 4 and 5 showed a significant reduction in the wound area ($p < 0.05$), compared to rats treated by goat fat and normal saline. Histological studies of all treatment groups (2, 3, 4 and 5), especially goat fat-treated rats, showed increased well-organized bands of collagen, more fibroblasts and few inflammatory cells in comparison with the normal saline group.

Conclusion: We can conclude that the use of a topical ointment containing goat fat and *Pistacia atlantica* can be effective for the acceleration of full-thickness wound healing in rats.

Keywords: Full-thickness wound, Mastic, Goat fat, Wound healing

HN10103230265

The effect of coffee consumption on the headache caused by spinal anesthesia for cesarean section

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Objectives: Despite the fact that headache after spinal anesthesia (PDPH) is a common problem in women undergoing cesarean section with spinal anesthesia, still there is uncertainty regarding the effectiveness of clinical treatments, particularly pharmaceutical ones. This study aims

to determine the effect of coffee consumption on headaches caused by spinal anesthesia for cesarean section.

Materials and Methods: This randomized clinical trial was performed on all the women referring to Razi Hospital for having cesarean section, in Torbat Heidarieh in 2014. A total of 140 cases were randomly selected (using permutation blocks). Then, the participants were divided into intervention and control groups. Immediately after the procedure, the patients in the intervention group received instant coffee twice with a one hour interval, each time two cups. The control group only received the routine care. In both groups, the incidence and severity of headache were evaluated by means of McGill questionnaire, 24 hours after the procedure. The data were analyzed performing descriptive and inferential statistics (Chi-square, t-test) tests using SPSS, version 21. p-value less than 0.05 was considered significant.

Results: The incidence of headache was observed in 15.7% of patients in the intervention group and 37.1% of patients in the control group, which was significantly different between two groups ($p=0.004$). The mean \pm SD of the intensity of PDPH was 22.2 \pm 4.6 in the control group and 13.5 \pm 5.8 in the intervention group. The results indicate a statistically significant difference between the two groups regarding intensity of PDPH ($p=0.001$).

Conclusion: This study showed that consumption of coffee in patients who have undergone cesarean section with spinal anesthesia can prevent PDPH and reduce the severity of headache.

Keywords: Cesarean section, Coffee, Headache after perforation of dura, Spinal anesthesia

HN10106850724

Effect of the slow-stroke back massage on symptoms cluster (pain, fatigue and sleep disorders) in patients with acute leukemia

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Objectives: Patients with leukemia experience pain, fatigue and sleep disorders at the same time, which severely affect their quality of life. Massage therapy can be used as a non-drug therapy to control these problems. However, there is a scarcity of studies on the effects of massage therapy on patients with leukemia.

Materials and Methods: In this clinical trial, 60 patients with acute leukemia were divided into two groups of intervention and control. The intervention group received slow-stroke back massage three times a week (10 minutes per session, every other day), for four weeks. The severity of pain, fatigue and sleep disorders was measured using a numerical rating scale. The quality of sleep was also determined by Pittsburgh Sleep Quality Index. Data were analyzed performing t-test, Chi-square and Mann-Whitney tests.

Results: The results showed that the intervention group improved significantly in terms of sleep disorder ($p=0.015$), pain severity and fatigue ($p=0.001$) and quality of sleep ($p=0.003$), as compared to the control group during the process.

Conclusion: Slow-stroke back massage can be used as an easy, safe and cost-effective method alongside with the usual nursing care to improve the cluster of symptoms in patients with acute leukemia undergoing chemotherapy. Oncology nurses have to increase their knowledge in the area of evaluation of symptoms and controlling them by the use of slow-stroke back massage in the patients with leukemia. In addition, using massage therapy for patients with leukemia should be included in the nursing education agenda.

Keywords: Acute leukemia, Fatigue, Massage therapy, Pain, Sleep disorder

HN10104680416

Comparison of the effects of Emla cream and rattles on the reduction of vaccination pain in infants aged 4 months

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Objectives: Infants respond more significantly to pain compared to adults. Therefore, recognition and application of pain control strategies by health care professional is of paramount importance in infants. This study aimed to compare the effects of Emla cream and rattles on the pain caused by vaccination in infants aged 4 months.

Materials and Methods: This randomized controlled clinical trial was conducted on 50 healthy infants selected by recruited sampling. Subjects were randomly divided into two intervention groups (N=16) and a control group (N=18). Infants in the control group were wrapped in blankets and placed on a bed for vaccination. In the first intervention group, rattles were used 30 seconds before and 15 seconds after vaccination; rattles were shaken by a researcher to distract infants from the pain shock. In the second intervention group, two grams of Emla cream was applied on the injection spot. After one hour, infant pain questionnaires were completed before, during and after vaccination via filming the infants. Data were analyzed using descriptive and inferential statistics in SPSS V.19.

Results: In this study, mean and standard deviation of pain during injection in the Emla group (7.12±0.5) and rattle group (0.87±0.96) reduced more significantly compared to the control group (8.67±0.77) (p<0.0001). According to the results of Tukey's test, there was a statistically significant difference between the control and Emla groups (p<0.0001), control and rattle groups (p=0.01), and rattles and Emla groups (p=0.02) during vaccination.

Conclusion: Mean of pain intensity in the Emla

group was the lowest compared to other groups; however, 15 seconds after vaccination, mean of pain intensity was the lowest in the rattle group and highest in the control group. Non-pharmacological methods are preferable in our country due to their cost-efficiency, as well as no need for skilled staff and physician prescription. Therefore, it is recommended that distraction techniques be commonly practiced for pain reduction in different patients.

Keywords: Pain, Rattles, Emla cream

HN10104680414

Effects of the concurrent use of oral rehydration salts (ORS) powder and rice soup in the treatment of acute diarrhea in infants aged 6-24 months

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Objectives: After respiratory tract infections, diarrhea is considered as a major cause of disability and mortality among infants in developing countries. This study aimed to evaluate the effects of concurrent use of oral rehydration salts (ORS) powder and rice soup in the treatment of acute diarrhea in infants aged 6-24 months.

Materials and Methods: This clinical trial was conducted on all the infants ageing 6-24 months, who were diagnosed with diarrhea and admitted at the children's ward of 22 Bahman Hospital of Gonabad in 2013. Patients were normal in terms of serum concentrations of sodium and potassium ions. Random allocation was used for sampling, and subjects were divided into two groups of

ORS (N=20) and ORS + rice soup (N=20). In this study, factors such as the length of diarrhea and hospitalization, rate of weight gain, need for intravenous fluids, number of defecations, creatinine and urea levels, and hematocrit were evaluated in both groups.

Results: In this study, simultaneous consumption of rice soup and ORS compared to the use of ORS alone resulted in shorter length of diarrhea (33.5 ± 5.72 vs. 47.15 ± 6.42 hours, $p < 0.001$), shorter hospital stay (34.05 ± 6.62 vs. 40.20 ± 6.32 hours, $p = 0.01$), higher rate of weight gain within the first 24 hours of treatment (91.75 ± 32.53 vs. 62.60 ± 14.36 g, $p = 0.001$), fewer defecations within the first 24 hours of treatment (4.20 ± 0.95 vs. 8.00 ± 1.37 times, $p < 0.001$), as well as the second 24 hours of treatment (2.18 ± 0.60 vs. 2.80 ± 0.76 times, $p = 0.03$). Moreover, receiving intravenous products within the first 24 hours of rehydration phase in the ORS + rice soup group had no significant difference with the ORS group (951 ± 111.61 vs. 946 ± 308.36 ml, $p = 0.68$). Before the treatment, biochemical parameters were similar between the study groups, while 48 hours after the treatment, none of the variables had a significant difference in the treatment group, with the exception of the significant increase in hemoglobin concentration ($p < 0.05$).

Conclusion: Regarding the effectiveness and cost-efficiency of rice soup diet in the treatment of acute diarrhea among infants, it could be used along with the conventional treatment with ORS in order to reduce neonatal mortality in developing countries.

Keywords: ORS, Rice soup, Diarrhea, Infants

HN10104680415

Comparison of the effects of SP6 acupressure and use of pethidine on the intensity of labor pain in nulliparous women

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Objectives: Considering the potential side effects of analgesic and anesthetic drugs in the management of labor pain, use of non-pharmacological methods for pain relief seems necessary. This study aimed to compare the effects of spleen-point-6 (SP6) acupressure and use of pethidine on the intensity of labor pain in nulliparous women.

Materials and Methods: This study was conducted on 48 pregnant women with term pregnancies, who were in the active stage of labor. Subjects were randomly selected and divided into two groups of acupressure and pethidine use. Data analysis was performed using descriptive and deductive statistics in SPSS V.19.

Results: Comparison of pain intensity before intervention showed no statistically significant difference between the groups ($p = 0.29$), and comparison of pain intensity in both groups during the intervention (2 minutes after the start of acupressure, 10 minutes after the injection of pethidine) was indicative of no statistically significant difference ($p = 0.25$). Moreover, comparison of average pain intensity one hour after the intervention showed no statistically significant difference between the groups ($p = 0.81$). Also, comparison of the average pain intensity in both groups 1.5 hours after the intervention revealed no statistically significant difference ($p = 0.27$).

Conclusion: According to the results of this study, SP6 acupressure leads to fewer complications and lower costs compared to the use of pethidine. Pethidine has numerous side effects, such as the weakness of the fetal central nervous system and reduction of heart rate variability. Although both these methods exert remarkable analgesic effects, use of acupressure is preferable over pethidine.

Keywords: Acupressure, Pain intensity, Visual analogue scale

HN10108030829

Comparison of the therapeutic effects of acupuncture and electrical stimulation with sustained-release ritalin in patients with osteoarthritis of the knee

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Objectives: Osteoarthritis is one of the most common joint diseases and an important disabling factor in the elderly. There are several treatment methods in complementary medicine to decrease pain and complications of this disease. This study aimed to compare the effects of acupuncture and electrical stimulation on internal and external Xi Yan (extra) points with sustained-release Ritalin.

Materials and Methods: 120 patients admitted to Long Hua Hospital of Shanghai were entered into the study with confirmed osteoarthritis disease based on osteoarthritis criteria of Rheumatic Diseases Society of America. Patients were randomly divided into two groups of case and control. The control group received 75 mg of sustained-release Ritalin per day which had to be orally consumed for one month, and the case group received acupuncture and electrical stimulation on internal and external Xi Yan points 3 times a week for 4 months. Pain, swelling, and knee range of motion were measured before and after treatment in both groups.

Results: In the case group, after treatment, the average score of knee functionality increased to 18. While in the control group it increased to 12.33 ($p < 0.05$). In patient follow-up, three months after treatment, improvement was again higher in the case group. However, in patient follow-up one year later, there was no significant difference in the two groups.

Conclusion: Based on the proven positive effects of acupuncture compared to prescribing sustained-release Ritalin in treatment of knee osteoarthritis, and also considering that up to now, there are no reports of side effects

of this treatment method in other studies, it is recommended to use this cheap, effective, and accessible method to cure knee osteoarthritis.

Keywords: Osteoarthritis, Acupuncture, Slow-release Ritalin

HN10101160031

Clinical evaluation of success in hypnosis for inducing local anesthesia in root canal therapy

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Objectives: In dentistry, despite the injection of local anesthetics, in several cases, deep sedation for root treatments might not be possible or there may be contraindications to common local anesthetics. In these cases, use of complementary medicine, especially hypnosis, can be of great help. The purpose of this study was to determine the success rate of hypnosis in inducing local anesthesia for root canal therapy.

Materials and Methods: This clinical trial was conducted on 12 patients with pulp involvement in vital teeth, referring to the endodontics section at the Faculty of Dentistry, Mashhad, Iran. Dental examinations and systematic medical forms were completed for all patients. Patients underwent hypnosis in the presence of their companions. The time of reaching anesthesia was recorded and the patient was preconditioned. In the second session, patients were entered into a state of hypnosis using the preconditioned phrase and the time of anesthesia achievement was recorded again. After confirming dental anesthesia, endodontic therapy was conducted. For data analysis, Mann-Whitney U test, Wilcoxon and Fisher's exact test were performed with a 59% confidence interval.

Results: The obtained results showed that at the

endodonticsession, 16 out of 21 cases (76.2%) reached deep anesthesia. The time of reaching local anesthesia in the second session was 3.8 minutes sooner than the first time (23.9 min). There was no significant difference in response to hypnosis among men and women. Use of hypnosis for inducing local anesthesia in root canal therapy was successful in 76.2% of cases and unsuccessful in 23.8% of patients; the difference was statistically significant.

Conclusion: Use of hypnosis is a proper clinical approach for local anesthesia indental root treatment. According to the success rate achieved in this study, in cases where local anesthesia was contraindicated in patients, hypnosis was a useful alternative strategy.

Keywords: Anesthesia, Hypnosis, Root canal treatment

HN10104010273

The effects of topical application of sesame oil on the treatment of phlebitis caused by the injection of anti-neoplastic agents

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Objectives: Today, cancer is regarded as one of the most important health concerns. Various methods such as chemotherapy have been applied for cancer treatment, all including intravenous administration of different agents. Catheter-related phlebitis is the most important and commonly reported complication, affecting half of cancer patients; this condition is also considered as a potential threat causing fatal infections. This study aimed to evaluate the effects of topical application of sesame oil on the treatment of phlebitis caused by the injection of

anti-neoplastic agents.

Materials and Methods: In total, 60 patients with colorectal cancer, who met the inclusion criteria, were enrolled in this study and were randomly divided into control and intervention groups. Sesame oil was given to the intervention group twice a day (10 drops) to be applied on the site of phlebitis; this region was massaged in a rotational manner and then bandaged. This region was also washed with baby soap before applying the oil. Patient follow-up lasted for one week. The control group was asked to wash the phlebitis location with baby soap before the massage. Then, the desired region was rotationally massaged twice a day for 5 min and then bandaged. The severity of phlebitis was evaluated based on the criteria on the first, third, fifth and seventh days.

Results: The results of Chi-square test showed that the distribution of sample units between the two groups was similar in terms of age, gender, place of residence, educational level, marital status, occupational status, race, intravenous injection site and severity of phlebitis on the first day, and no significant difference was observed ($p>0.05$). However, independent t-test results confirmed that the severity of phlebitis was significantly different between the intervention and control groups on the third, fifth and seventh days ($p<0.05$).

Conclusion: According to the results of this study, topical application of sesame oil could accelerate the healing process of phlebitis due to the injection of anti-neoplastic agents.

Keywrds: Antineoplastic drugs, Phlebitis, Sesame oil

HN10102430103

Effects of aromatherapy with rosa essence on hemodynamic indices after dressing change in burn patients

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Objectives: Changes of hemodynamic indices is a common problem among burn patients,

the intensity of which increase after dressing changes. Use of complementary medicine could be effective in reducing sympathetic reactions and stabilizing vital signs in these patients. This study aimed to determine the effects of aromatherapy with Rosa essence on hemodynamic indices after dressing changes in burn patients.

Materials and Methods: This randomized controlled clinical trial was conducted on 50 patients admitted at the burn unit of Be'sat Hospital in Hamadan, Iran during April-September 2013. Subjects were selected by simple random sampling and divided into two groups of control and intervention. Using the same method, vital signs of the patients were recorded during two days 30 minutes before dressing changes. Afterwards, intervention subjects inhaled 5 drops of 40% Rosa essence dissolved in distilled water for 20 minutes. Patients in the control group inhaled 5 drops of water as placebo and changed their dressings. Vital signs of the patients were recorded at 15 and 30 minutes after the completion of dressing changes. Data were analyzed using SPSS V.16.

Results: Aromatherapy with Rosa essence caused a significant reduction in the heart rate of the patients after changing burn bandages ($p < 0.05$). However, there were no significant effects on the blood pressure and respiratory rate of the subjects.

Conclusion: According to the results of this study, aromatherapy with Rosa essence could reduce the heart rate caused by burn dressing changes. Therefore, this complementary method could be used for elderly patients, or those with cardiovascular disease, as a safe treatment option.

Keywords: Aromatherapy, Rosa essence, Physiological symptoms, Burn dressing

HN10104850344

Effects of acupressure on the quality of sleep in patients with chronic heart failure

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Objectives: Sleep disorders are common problems among patients with chronic heart failure. Acupressure is a complementary method used for the treatment of such disorders. This study aimed to evaluate the effects of acupressure on the quality of sleep in patients with chronic heart failure.

Materials and Methods: This double-blind, controlled clinical trial was conducted on 60 patients with chronic heart failure hospitalized at heart unit of 22nd Bahman Hospital of Neyshaboor in 2014. Subjects met the inclusion criteria and were randomly divided into three groups of acupressure, false points and control. In the acupressure group, Shen Men points of the wrists were massaged for five minutes during three days. In the false point group, massage was performed using the same approach at the distance of 1-1.5 cm from the main point. In addition, subjects in the control group received usual care. Data were collected using St. Mary's Hospital Sleep Questionnaires (SMHSQ). Data analysis was performed using SAS software.

Results: In this study, patients were homogeneous in terms of demographic characteristics. After the intervention, there was a significant difference in the total score of sleep quality ($p < 0.001$), mental quality of sleep ($p < 0.001$), quality sleep ($p < 0.001$), sleep dysfunction ($p < 0.001$), sleep disorders ($p < 0.001$), length of sleep ($p = 0.001$) and delayed sleep ($p = 0.06$) between the study groups.

Conclusion: According to the results of this study, acupressure could increase the quality of sleep in patients with chronic heart failure, and is recommended as a non-invasive method for the treatment of sleep disorders among these patients.

Keywords: Chronic heart failure, Sleep quality, Acupressure

HN10105350864

Treatment of baby colic in the perspective of traditional medicine

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Objectives: Baby colic is defined as excessive crying for more than three hours a day, which usually occurs in the late afternoon or evening during 2-3 weeks. Previous studies have estimated the prevalence of baby colic at 20%. Onset of colic is normally at the second week of birth, and it may continue for four months. The main clinical symptom of colic is excessive crying more than three hours a day for three consecutive days a week (over three weeks) in normal children. Other symptoms include pulling of the legs, clenched fists, abdominal stiffness, belching, gas passing, shrill crying and frequent vomiting after feeding.

Materials and Methods: No data could be found about baby colic in the review of traditional medicine references, including the Treatise of Colic by Avicenna and Muhammad-Ibn-Zakariya al-Razi. Therefore, we compared traditional medicine and modern medicine regarding the differences in child raising methods; swaddling is one of the classic approaches depicted in the traditional medicine.

Results: For swaddling, a string is tied crossed on the umbilicus of the infant, which prevents the intestine from getting caught below the navel in peritoneum. This traditional method could be used for the prevention of colic among infants.

Conclusion: According to the results of this study, swaddling could be effective in the prevention of baby colic with no significant side effect in infants. Moreover, colic will not be repeated if the umbilicus remains tied up for 20 days, and signs of recovery appear immediately afterwards.

Keywords: Baby colic, Complementary medicine, Swaddling, Traditional medicine, Umbilical hernia

HN10109071054

The effects of guided imagery on anxiety level of the patients undergoing hernioraphy surgery

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Objectives: All individuals have experienced anxiety to some extent, when faced with new situations and challenges in life, especially those who are supposed to be operated. Preoperative anxiety affects the psychological and physiological well-being. Anxiety reduction is known as part of pre-operative nursing care. The present study investigates the effects of guided imagery on anxiety level of the patients undergoing hernioraphy surgery.

Materials and Methods: This randomized clinical trial was performed on 56 patients admitted to Sabzevar Beheshti Hospital to undergo hernioraphy, in 2013. The subjects were randomly divided into intervention and control groups. The intervention group listened to audio CD guided imagery for 18 minutes, one hour before the surgery. The participants filled out the Spielberger Anxiety Inventory before and after the study. The data were analyzed performing chi-squared, paired t-test and analysis of covariance using SPSS, version 20. Moreover, 95% confidence level was considered significant.

Results: The average of state and trait anxiety level in the Guided Imagery group decreased from 46.84±9.00 and 39.75±8.63 to 35.89±6.14 and 38.20±8.07 and in the control group increased from 45.12±9.14 and 39.29±8.51 to 52.56±10.59 and 39.98±8.41 at the end of the study. The results of the Paired t-test showed statistically significant difference between the levels of anxiety before and after the study in the two group (p<0.001).

Conclusion: A guided imagery session before surgery can reduce state and trait anxiety. Therefore, using this method can help with

reduce preoperative anxiety in patients.

Keywords: Anxiety, Guided imagery, Surgery

HN10106450630

Various clinical effects of *Nigella sativa* and its constituents

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Objectives: *Nigella sativa* (*N. sativa*), as an herbal medicine with a rich historical background, has been traditionally used in treatment of several diseases including infertility, fever, cough, bronchitis, asthma, chronic headache, migraine, dizziness, chest congestion, dysmenorrhea, obesity, diabetes, paralysis, hemiplegia, back pain, infection, , hypertension, inflammatory disorders such as rheumatism and gastrointestinal problems such as dyspepsia, flatulence, dysentery and diarrhea. In addition, the *N. sativa* oil has been used as an ointment to relieve abscesses, nasal ulcers, orchitis, eczema and swollen joints.

Materials and Methods: This review was performed searching databases such as PubMed, Sciencedirect, Scopus, Google Scholar, Embase, ISI Web of Knowledge, Biological Abstracts and Chemical Abstracts for the terms: *Nigella sativa*, its different constituents' clinical effects and different disorders between 1994 and 2014.

Results: In the last three decades, several *in-vivo* and *in-vitro* animal studies revealed the beneficial properties of this plant including: anti-oxidant, antibacterial, anti-proliferative, pro-apoptotic, anti-inflammatory, anti-epileptic, improving atherogenesis, endothelial dysfunction, glucose metabolism and lipid profile dysfunction and preventing hippocampus pyramidal cell loss. In clinical studies, antidiabetic, antimicrobial, anti-oxidant properties and effects on metabolic syndrome and gastrointestinal, respiratory, urinary and reproductive disorders, as well as neuro-protective, antitumor and cardioprotective activities were shown for *N. sativa* and its constituents.

Conclusion: Literature and the experimental data of the scientific studies indicated various clinical effects of *N. sativa* and its constituents.

Therefore, it is highly recommended to use their preventive and therapeutic effects for treating different diseases.

Keywords: Anti-diabetic, Cardioprotective, *Nigella sativa*, Respiratory disorders

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The effect of ear acupressure on severity of pain in patients waiting for appendectomy

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Objectives: Pain is one of the irritating symptoms that patients experience before undergoing appendectomy. This study aims to evaluate the effect of ear acupuncture on the pain of patients waiting for appendectomy.

Materials and Methods: This blind clinical trial was done on three groups of 72 patients waiting for appendectomy in surgery section of Beidokht Hospital. Samples were collected using the available method, and then they were randomly divided into three groups of intervention, placebo and control.

All three groups received common treatments of the ward. The patients of intervention group received acupressure in the correct points (Thalamus) and the placebo group received it in fake points for 15 minutes. The severity of pain was measured using visual standard severity of pain immediately before, after and half an hour after the intervention. Then, the collected data were compared.

Data was analyzed performing the suitable statistical tests, using SPSS, version 19. p-value less than 0.05 was considered significant.

Results: Based on the results of this study,

applying acupressure on the correct points can significantly decrease the average amount of pain in the 30th minute ($p= 0.02$) after intervention in the test group as compared to the control and placebo groups.

Conclusion: Using acupressure at the ear thalamus can decrease the amount of pain in patients waiting for appendectomy.

Keywords: Appendectomy, Ear acupressure, Pain

HN10100680483

A review of the relationship between the stomach and spleen from the perspective of traditional medicine and anatomical comparison with the findings of modern medicine

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Objectives: One of the benefits of melancholein the body is to stimulate the appetite. It occurs when spleen melanchole pours into the cardiac orifice of the stomach. According to traditional medicine resources, one of the vessels is responsible for this effusion. Given the importance of the relationship between the stomach and the spleen, we decided to explain the compliance of this vessel with anatomical findings of modern medicine.

Materials and Methods: Iranian traditional medicine sources and contemporary anatomical atlases were searched and the findings compared.

Results: The vessel that carries melanchole to the cardiac orifice of the stomach is a branch of the small gastric vein that anastomoses with the left gastric vein.

Conclusion: According to IbnSina's Canon, the portal vein after parting from the liver divides into eight branches, one of which is called splenic vein, which goes toward spleen and branches in two: upward and downward. Another branch departs from the upward strand and goes toward the stomach. This terminal branch that approaches the stomach, branches into two itself. One branch spreads around the left side of the stomach and the other goes toward the Cardia to discharge melanchole. The final strand, according to anatomical atlases, is the branch of the small gastric vein that anastomoses with the left gastric vein and is precisely located in the Cardia area.

Keywords: Small gastric, Spleen, Stomach orifice, Soda, Melanchole

HN10103910229

The effects of *teucrium polium* l. on human influenza virus

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Objectives: *Teucrium polium* L., an herbaceous plant, can be found in different parts of Iran. This plant has been traditionally and widely used for the treatment of many conditions such as inflammation and gastrointestinal disorders, without any hazardous or critical side-effects. Considering the antibacterial and antioxidant effects of *Teucrium polium* L., which have been recently studied, this plant may possess antiviral properties, as well.

Materials and Methods: The present study was carried out in two steps. First, the dried plant was extracted using maceration in 70% ethanol. Then, the liquid was dehydrated and different concentrations of the extract

were prepared. Second, Madin-Darby Canine Kidney (MDCK) cells were grown in Dulbecco's Modified Eagle's Medium (DMEM), containing 5% fetal bovine serum. Serial dilutions of the extracted suspension (1/10, 1/20, 1/40 and 1/80) were incubated by the exact titer of viruses (A/caledonia/20/99-H1N1) and monitored for antiviral activity. Cell viability was evaluated using Trypan blue exclusion test.

Results: The results showed that ethanolic and aqueous extracts of *Teucrium polium L.* at the evaluated concentrations had no significant effects on influenza virus infectivity.

Conclusion: In spite of the obtained results, for further clarification, it is recommended that future in vivo studies evaluate the antiviral effects of this plant using different methods and viruses.

Keywords: Cell pathologic effect, Influenza, *Teucrium polium*, Virus

HN10105210376

Comparative study of the effects of acupressure and metoclopramide on nausea during pregnancy in women referring to healthcare centers of Gonabad, Iran in 2010

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Objectives: Nausea and vomiting during pregnancy (NVP) is the most common disorder during pregnancy, which is accompanied by common side-effects. Although various alternative drugs and techniques have been proposed for improving NVP, choosing the most

effective method with the lowest complications requires further research. Therefore, this study was performed to study the effects of acupressure and metoclopramide on NVP.

Materials and Methods: In this randomized clinical trial, 90 pregnant women (gestational age of less than 20 weeks) with NVP, referring to healthcare centers of Gonabad, were selected. The study samples were randomly divided into three groups. The metoclopramide group used 10 mg metoclopramide tablets twice a day (30 min before lunch and dinner). In the acupressure group, pregnant women continuously wore a bracelet with a button, adjusted on P6 antiemetic point (Neiguan). The samples in the control group did not receive any interventions. The treatment continued for eight days. The Visual Analogue Scale was completed by eligible pregnant women one day before starting the treatment. During the treatment, severity and frequency of nausea were recorded. For data analysis, Chi-square, ANOVA, Wilcoxon and t-test were performed, using SPSS version 19.

Results: There was no significant difference between the three groups in terms of age, gestational age, educational level, occupational status and income ($p>0.05$). However, there was a significant difference between the groups in terms of the frequency ($p=0.04$) and intensity of nausea ($p=0.03$) one day before the treatment; this difference was related to the control group. There was no significant difference in the frequency of nausea before and after the study in the control group ($p=0.78$), whereas there was a significant difference in the metoclopramide ($p=0.001$) and C-band ($p=0.001$) groups. There was no significant difference in the mean severity of nausea in the control group before and after the study ($p=0.58$). However, a significant difference was observed in metoclopramide ($p=0.001$) and C-band ($p=0.001$) groups.

Conclusion: The results of our study showed that C-band has effects similar to metoclopramide. Therefore, considering the prevalence of NVP and side-effects of drugs, acupressure is highly recommended.

Keywords: Acupressure, Metoclopramide, Nausea and vomiting during pregnancy, Nei Guan (P6)

HN10101990068

The preventive effect of rutin on oxidative stress factors and movement activity in focal cerebral ischemia of rats

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Objectives: Ischemic stroke is caused by the interruption of cerebral blood flow, leading to brain damage with long-term sensorimotor deficits. The free radicals induced by neural damage are associated with cerebral ischemia-reperfusion (IR) injury and antioxidants are reported to have neuroprotective activity. The present study was designed to assess the neuroprotective role of rutin (vitamin P), and its mechanism of action.

Materials and Methods: The middle cerebral artery occlusion (MCAO) of adult male Wistar rats was done for two hours and re-perfused for 22 hours. The administration of rutin (50 mg/kg bwt, in-vitro) was done once daily for 14 days before MCAO. Then, brain malondialdehyde (MDA) and thiol levels and also the motor coordination (Rotarod test) were assessed.

Results: MDA level of brain did not increase significantly in the MCAO group as compared to the group control. The thiol level of brain significantly decreased in the MCAO group as compared to the group control ($p < 0.05$). The thiol level in the control and MCAO+rutin groups were almost identical ($p < 0.05$). The Rotarod test demonstrated that stand duration rates in the MCAO group decreased significantly as compared to the control group ($p < 0.05$). It increased significantly in the MCAO+rutin group as compared to the MCAO group ($p < 0.05$).

Conclusion: The behavior changes test and increasing endogenous antioxidant enzymatic activities indicate that rutin have a neuroprotective role. Thus, rutin treatment may be a novel approach to lowering the risk or improving the function of ischemia-reperfusion brain injury-related disorders.

Keywords: Focal cerebral ischemia, Oxidative stress, Rat, Rutin

HN10106510531

The effects of ginger on nausea and vomiting during pregnancy: a systematic review

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Objectives: Nausea and vomiting are among the most common complications during pregnancy, with negative impacts on pregnant women. Unfortunately, insufficient attention has been paid to these issues. Ginger is one of the most commonly used herbal medicines, found abundantly in Iran. This study was conducted to evaluate the effects of ginger on nausea and vomiting during the first stage of pregnancy.

Materials and Methods: All domestic and some international databases were searched, using certain keywords. The researchers evaluated the articles in terms of the inclusion criteria, and eventually seven clinical trials conducted in the country were assessed.

Results: In total, 525 individuals were evaluated in this study. All articles were similar in terms of age, severity of symptoms, age of pregnancy, concurrent infections and use of drugs. All studies highlighted the effectiveness of ginger in reducing nausea and frequency of vomiting following pregnancy.

Conclusion: According to the results of this systematic review, substantial evidence on the reduced severity and frequency of nausea and vomiting and lack of evidence on ginger complications, it seems that we can suggest the use of ginger as an alternative treatment during pregnancy.

Keywords: Ginger, Nausea, Pregnancy, Systematic review, Vomiting

HN10100340040

Silymarin consumption and resistance training on antioxidants

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Objectives: The purpose of this study was to investigate the effect of six weeks of resistance training and silymarin consumption on the superoxide dismutase (SOD) and Hsp70 (heat shock protein 70) of untrained females.

Materials and Methods: Overall, 32 untrained women (age: 22.9±1.33 years, weight: 63.71±7.28 Kg, and BMI: 24.85±2.51 kg.m⁻²), participated in our study. They were randomly divided into three equal groups, i.e., resistance (R) and resistance with silymarin consumption (RS) and control group (C) (n=8). The trained group was assigned to a six week resistance training program (three times a week), with intensity of 65-80% MVC (Maximal Voluntary Contraction). Moreover, 50 mg/kg/day silymarin juice was prescribed to the RS group. The control group continued their normal lifestyle. Body weight (BW), SOD and Hsp70 were measured. Analysis of covariance (ANCOVA) was used to perform pairwise comparisons and Bonferroni test was applied as the post-hoc test (p-value≤0.05).

Results: ANCOVA indicated significantly decreased SOD (F=3.72, p=0.04) and HSP70 (F=7.37, p=0.01) among the three groups (p≤0.05).

Conclusion: This study suggests that the six weeks resistance training with a moderate intensity together with silymarin (similar anti-inflammatory) consumption could affect Hsp70 and SOD in normal healthy subjects.

Keywords: Hsp70, Resistance training, Silymarin, SOD

HN10100860601

Use of ear acupressure as a strategy to relieve nausea and vomiting caused by chemotherapy in patients with breast cancer

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Objectives: One of the major treatment strategies for breast cancer is chemotherapy. Nausea and vomiting are the most common side-effects of chemotherapy, occurring in 40-80% of patients. The aim of this study was to determine the effects of ear acupressure on controlling vomiting in patients with breast cancer undergoing chemotherapy.

Materials and Methods: This one-dimensional, randomized clinical trial was conducted on 48 women with breast cancer, undergoing one-day chemotherapy with agents inducing moderate to severe levels of nausea and vomiting in February-June 2015 at chemotherapy centers of Imam Khomeini and Rasul Akram Hospital. After obtaining informed consent forms, patients were divided into intervention and control groups via randomized block sampling. Before chemotherapy, the researcher applied acupressure on five points of patients' ears (considered effective for controlling vomiting) in the intervention group, in addition to administering routine drugs. The subjects were asked to massage these points three times a day for three minutes (for five days). The control

group only received routine medicines for controlling nausea and vomiting. Data were gathered using a demographic questionnaire and standard Morrow questionnaire to evaluate the severity and frequency of nausea and vomiting. For statistical analysis, descriptive and inferential tests were performed, using SPSS version 21.

Results: The two groups were not significantly different in terms of the severity of emetic risks of chemotherapy, age, marital status and level of knowledge about acupuncture ($p < 0.05$). The findings revealed that the frequency of nausea and vomiting reduced in the intervention group (from $0.140.53 \pm$ to $2.063.74 \pm$, respectively), compared to the control group (from $1.862.36 \pm$ to $5.657.48 \pm$) ($p < 0.05$). Also, use of acupuncture did not have any side-effects in patients.

Conclusion: The results showed that using ear acupuncture on Shen Men points, heart, stomach and central nervous system, along with antiemetic regimens, can lead to a decrease in nausea and vomiting in the late stage of cancer. Therefore, it is recommended that nurses use this technique as a complementary method to reduce vomiting induced by chemotherapy.

Keywords: Breast cancer, Chemotherapy, Ear acupuncture, Late-stage nausea and vomiting

HN10108780983

Evaluation of the current status of apothecary shops in Mashhad and the necessity to monitor the related training courses

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Objectives: Apothecary shops in Iran are undoubtedly one of the most important providers

of medicinal herbs. However, most of apothecaries are not properly trained. Therefore, epidemiologic study of the current status of apothecary shops, as one of the most important medicinal herb distributors in the society, is of great importance.

Materials and Methods: This descriptive study was conducted on apothecary shops in Mashhad in 2014. In total, 36 apothecary shops were randomly selected from seven districts of the city. The researcher-made questionnaire was completed by the apothecaries in the presence of the researcher after confirming its validity and reliability. This questionnaire consisted of demographic and professional information. Data were analyzed using SPSS version 11.5 and descriptive statistical tests (mean and relative frequency distribution).

Results: The mean age of the participants was 42 years. The subjects had work experience of 14.44 years, and 53.3% of the participants had high-school diploma. The most common way of apothecary training was learning from predecessors (72%). Only 8.3% of the subjects had participated in all three training courses approved by the Union (practical course, operation and consultation). Also, 83.3% stated that they had not passed any training courses related to their job. Moreover, 80% of the subjects did not wear white coats during practice. As the results indicated, 94.4% of the apothecaries believed that 69.4% of medicinal herbs were stored in sacks. In terms of suitable physical environments, 10% of the apothecary shops had stone walls. Only 8% of these shops were equipped with fire extinguisher.

Conclusion: Based on the current findings and the importance of apothecary shops in meeting people's needs for medicinal herbs, it seems that one of the most important tasks is to promote effective support and monitoring by the Ministry of Health and hold educational courses about proper storage of medicinal herbs and the importance of proper physical environments. Finally, it is recommended to cement our status in the global market of medicinal herbs, considering the enriched resources of medicinal herbs in Iran. This way we can promote employment and produce knowledge and wealth in our country.

Keywords: Apothecary shop, Monitoring, Profession, Training course

HN10107950804

Evaluation of toxicity of different levels of green tea epigallocatechin-3-gallate on T47D breast cancer cell line

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Objectives: After lung cancer, breast cancer is considered to be the second cause of cancer-related death in women, and the most common cancer in women after non-melanoma cancer. According to the World Health Organization statistics, every year 1.2 million women are diagnosed with breast cancer, more than 500000 of whom die. Green tea has antioxidant, antitumor, and antibacterial properties which regulate the endocrine glands. It is known that epigallocatechin gallate (EGCG) in green tea induces apoptosis and death of cancer cells, but it does not have the same impact on normal cells. As treatment of this disease is hampered by many problems, this study aimed to evaluate the anticancer effects of EGCG and its effect on expression of genes involved in apoptosis and cell growth in the T47D breast cancer cell line.

Materials and Methods: First, the cells of the breast cancer line, purchased from the cell bank of Iran Pasteur Institute, were cultured in DMEM, and then they were incubated with different concentrations of EGCG (50–80 µg/ml). Real-time PCR was used to detect the expression level of the BCL-2 gene and to confirm the apoptosis mechanism.

Results: It was concluded from the results that EGCG morphologically increases mortality in all concentrations, and significantly decreases expression of the BCL-2 anti-apoptotic gene ($p<0.05$).

Conclusion: Overall, based on the results of this study, changes in the expression level of the mentioned gene, and agreement of the results with the findings of previous studies, it can be

deduced that the effect of EGCG on human breast cancer cells is undeniable. However, more research on these compounds is recommended to identify the mechanism more accurately.

Keywords: Green tea, Epigallocatechin-3-Gallate, Breast Cancer

HN10108151001

Evaluation of the effects of *Urtica pilulifera* L. Seed extract on formalin-induced inflammation in rats

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Objectives: Considering the adverse complications caused by the treatment of inflammation, new and effective drugs and methods are required. *Urtica pilulifera* L. is a medicinal plant, which has been known to have therapeutic effects on inflammation according to the Iranian traditional medicine (ITM).

Materials and Methods: In this study, formalin-induced hind paw edema was instigated in rats. Based on the treatments, the animals were divided into the following groups: recipients of sodium salicylate (S.S) (300 mg/kg) as positive control, recipients of the methanol extract of *U. pilulifera* (MUP) (20 mg/kg), recipients of aqueous extract of *U. pilulifera* (AUP) (20, 40 and 80 mg/kg), and recipients of distilled water (6 mL/kg).

Results: In acute inflammation, AUP caused a significant reduction in paw edema at doses of 40 and 80 mg/kg ($p<0.05$), while in chronic inflammation, the anti-inflammatory effects of MUP and AUP (at all doses) had no significant difference with the S.S. group ($p<0.05$).

Conclusion: According to the results of this study, AUP had significant effects on both acute

and chronic inflammation, while MAP was observed to be more effective in the treatment of chronic inflammation. The findings of the current study confirmed the anti-inflammatory properties of *U. pilulifera*, which is correspondent with the perspective of ITM literature.

Keywords: *Urtica pilulifera* L., Inflammation, Formalin test, Iranian traditional medicine

HN10108340930

Sabigh a cosmeceutical concept in traditional Iranian medicine and pharmacy

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Objectives: Today the term cosmeceutical refers to substances that possess cosmetic and therapeutic benefits. This concept was introduced hundreds of years ago in '*Baab e zinat*', the last chapter of traditional Iranian medicine (TIM) treatises. One class of preparations which were designed specifically to cover scars and pigmentation problems of the skin was called '*Sabgh*'. In this study we investigated *Sabgh* formulations in TIM and the possibility of their utilization by modern industries.

Materials and Methods: The terms *Sabgh* and *Sabigh* (plural form) were searched in twelve of the famous TIM books. The ingredients were identified through the descriptions in the traditional Iranian treatises. Their cosmeceutical effects were searched in traditional books and electronic databases. The possibility of the industrial use of these ingredients was further investigated based on their availability and safety.

Results: A total of 43 formulations were found. There were 52 herbal, 18 mineral and 10 animal-derived ingredients. Some of these ingredients could be used today by cosmeceutical industries. However there are components with known toxicities which have limitations in dermatological use.

Conclusion: In the skin-care market, cosmeceuticals are the fastest growing segment. However this concept is not new in TIM. '*Baab e zinat*' represents hundreds of preparations which were formulated for their therapeutic and cosmetic effects by ancient scholars. The availability and safety of these ingredients according to today's standards should be investigated. TIM books could be a valuable source for natural cosmeceutical formulations and or ingredients.

Keywords: Cosmeceuticals; Traditional Iranian medicine; *Sabgh*

HN10106290890

Effects of bile disorder on constipation in the perspective of Iranian traditional medicine

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Objectives: Constipation is the most common clinical complaint among patients, and if prolonged, it may lead to severe complications. Constipation is a significant issue in the Iranian traditional medicine, and some scholars consider it as the root of all diseases. This study aimed to determine the effects of bile disorder on constipation in the perspective of the Iranian traditional medicine.

Materials and Methods: In this descriptive review, data were extracted from reliable references of the Iranian traditional medicine, and findings focusing on bile and its effects on defecation were classified and evaluated.

Results: Bile is one of the four main temperaments, and some of the key body functions, such as defecation, are controlled by this temperament. Bile could lead to the disposal of viscous materials in the colon and cause constipation. On the other hand, by stimulating the bowel wall, bile may

expedite defecation. Constipation occurs if the quality and quantity of bile is disturbed for any reason, or in case the bile fails to enter the colon due to pathway obstruction.

Conclusion: Given the key role of bile in constipation, attention should be given to events such as deficiency and impairment of bile, and pathway obstruction of the colon, for the accurate diagnosis and treatment of the patients. In this regard, the level of bile should be increased, and barriers against its entrance into the colon should be removed to facilitate defecation. Traditional medicine offers specific treatment strategies for each of these conditions, which could be used as validated data in future studies.

Keywords: Bile, Constipation, Iranian traditional medicine

HN10104250277

The effects of aromatherapy with lavender essential oil on the severity of headaches induced by nitroglycerin infusion in patients admitted to the coronary care unit

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Objectives: The majority of patients, receiving nitroglycerin infusion, experience headaches to some extent. Uncontrolled pain can lead to various complications such as increased myocardial oxygen consumption and deterioration or inhibition of the respiratory system. This study aimed to determine the effects of aromatherapy with lavender essential oil on the severity of pain

induced by nitroglycerin infusion in patients admitted to a coronary care unit.

Materials and Methods: In this clinical trial, 135 patients were randomly divided into three groups (n=45 cases per group): lavender essence, acetaminophen and placebo groups. Immediately after inducing the headaches, lavender essence was inhaled by the essence group for 30 minutes, using a cotton cloth soaked in three drops of the essence. The acetaminophen group used a 325 mg acetaminophen capsule orally. The placebo group inhaled liquid paraffin for 30 min instead of lavender essence, which was used in the lavender group. The severity of headaches was measured before the intervention and at 15, 30 and 60 minutes after the intervention, using a visual analogue scale; the reliability and validity of this scale had been previously confirmed. Chi-square, ANOVA, Kruskal-Wallis, Monte Carlo, Friedman, Wilcoxon test and Bonferroni correction were used to analyze the data.

Results: The findings showed that pain severity was significantly different between the three groups after the intervention ($p < 0.05$). Also, two-by-two comparison of the groups showed that headache significantly decreased in the lavender group, compared to the acetaminophen group ($p < 0.05$). Moreover, the acetaminophen group experienced a more significant reduction in headaches, compared to the placebo group ($p < 0.05$).

Conclusion: Aromatherapy with lavender essential oil can be effective in decreasing headaches in patients receiving nitroglycerin infusion, without having any serious side-effects. Therefore, use of this essence is suggested as an effective and inexpensive method with few side-effects.

Keywords: Aromatherapy, Essential oil, Headache, Lavender essence, Nitroglycerin

HN10107680760

The effects of foot reflexology massage on incisional pain in abdominal and chest surgery patients admitted to intensive care units

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Objectives: Although analgesics are commonly used for pain alleviation, the side-effects of these medications lead to severe and chronic pain in patients. Therefore, non-pharmacological methods of pain reduction can be useful. In this study, we aimed to evaluate the effects of foot reflexology massage on patients undergoing major thoracoabdominal surgery, admitted to intensive care units.

Materials and Methods: In this semi-experimental study, 102 patients (age range of 25-50 years), without any other surgical complications and normal feet, who had undergone thoracoabdominal surgery, were enrolled. The patients were randomly allocated into three equal groups: massage group, pseudo-massage group and control group. Pain measurement was performed, using the Visual Analogue Scale before the treatment, immediately after the treatment and 10 min and 24 hrs following the intervention. Further information was extracted from patients' medical records. The data were analyzed using SPSS and statistical tests. p-value less than 0.05 was considered statistically significant.

Results: The obtained findings showed that the three groups were not significantly different in terms of age, sex, marital status, educational level, underlying diseases or site, type and duration of surgery ($p > 0.05$). Furthermore, pain level was not different between groups before and immediately after the intervention. However, pain was less intense in the massage group at 10 min and 24 hrs following the intervention. Use of analgesics also significantly reduced in the massage group ($p < 0.05$).

Conclusion: The results of this study showed that the effects of foot reflexology on incisional pain relief in the massage group were more significant than the control and pseudo-massage groups. Therefore, by applying the current findings, nurses can improve patients' comfort and reduce the use of pain analgesics.

Keywords: Abdominal and chest surgery, Foot reflexology massage, Incisional pain

HN10104420926

Anti-giardia effects of olive leaf extract and Khuzestan fennel compared with metronidazole under tubal conditions

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Objectives: Giardia lamblia is one of the major causes of diarrhea in children worldwide. Although there are some effective treatments for this disease, evidence have demonstrated drug resistance, poor efficiency and undesirable side effects. In order to suggest a natural drug with reasonable efficiency and minimal side effects, the effects of olive leaf hydroalcoholic extract and Khuzestan fennel on Giardia cyst were investigated. Moreover, their impact was compared to that of metronidazole as the drug of choice under tubal conditions.

Materials and Methods: Overall, 2 and 5 mg of each plant extract and 250 mg tablets of metronidazole powder were added to 1 ml of Giardia cysts suspension (containing 5000 cysts per ml normal saline). Subsequently, the percentage of living and dead cysts, following 24- hours of exposure at 4 and 37 ° C was determined using eosin vital dye 0.1% and a hemocytometer lam. The data were analyzed using SPSS, version 18, in which ANOVA and Tukey tests were performed.

Results: The results showed that under tubal conditions, olive leaf extract has the highest case-fatality rate on Giardia lamblia cysts (mean: 37.9±7.10%) and Khuzestan fennel extract (mean: 32.52%±9.07%) had the second

most anti-Giardia effects. Metronidazole 250 mg tablet had a relatively high case-fatality rate on Giardia lamblia cysts (mean: 28.75%±10.30%) under the same conditions.

Conclusion: The results of this study suggest substantial case-fatality effect of olive leaf and Khuzestan fennel extracts, as compared to metronidazole, on Giardia lamblia cysts under tubal conditions. Therefore, these plants can be suitable candidates for developing new anti-Giardia drugs with minimal side effects and no drug resistance in treatment of giardiasis in children.

Keywords: Giardia lamblia, Khuzestan fennel, Metronidazole, Olive leaf, Tubal condition

HN10107410689

Evaluation of prevalence of medicinal herb usage by students of Qom university of medical sciences

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Objectives: Due to the well-known side effects of chemical drugs, and since traditional medicine is more approved by the public because it has fewer complications, we decided to conduct this study in order to evaluate the prevalence of herbal medicine usage among students of Qom University of Medical Sciences.

Materials and Methods: 136 students of Qom University of Medical Sciences were entered in this cross-sectional study in 1392 (2013) by the easy sampling method. Data gathering tool was a self-designed questionnaire approved for validity and reliability. Data was analyzed using frequency tables and chi-square and t-tests. The level of significance for interpretation of results

was less than 0.05 in.

Results: Out of 136 studied students, it was determined that 131 (96.32%) used medicinal herbs, among which 18 (13.74%) used them for prevention and 52 (40.45%) for treatment; Sisymbrium irio had the highest rate of usage. The most important reason for using herbal medicines was their fewer side effects compared to chemical drugs (59.54% of participants).

Conclusion: According to the results, students of medical sciences favor medicinal herbs, due to their familiarity with drugs and their complications. Therefore, it is necessary to raise the public's awareness about the complications of medicinal herbs.

Keywords: Traditional medicine, Medicinal herbs, Students

HN10101280629

The effectiveness of Artemisia distilled water in reducing blood sugar in type II diabetic patients referring to Peymanieh diabetes clinic of Jahrom, Iran

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Objectives: Artemisia distilled water is frequently prescribed by some local apothecary shops for the treatment of diabetic patients. The main purpose of this study was to evaluate the hypoglycemic effects of Artemisia distilled water on type II diabetes.

Materials and Methods: In total, 40 type II diabetic patients were randomly divided into case and control groups. The case group received 60 cc of Artemisia distilled water (orally) on an empty stomach per day for one month, in addition to usual oral drugs. The control group only received the usual medicines. The patients were evaluated in terms of fasting blood glucose

and the number of used capsules before the intervention and at 1, 2, 3 and 4 weeks following the intervention.

Results: The overall reduction in fasting blood sugar was more significant in the case group, compared to the control group. Also, the increase in the prescription and use of metformin was more significant in the control group.

Conclusion: Daily oral use of 60 cc of Artemisia distilled water for type II diabetic patients, along with usual agents, led to a decrease in the increasing trend of metformin consumption, in addition to intensifying the hypoglycemic effects of anti-diabetic agents. Therefore, use of this plant is recommended along with synthetic drugs.

Keywords: Artemisia, Diabetes, Medicinal herbs

HN10108831043

Investigation of hypnotic effects of hydroalcoholic extract of Norfolk Island pine in mice

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Objectives: Insomnia is one of the problems that many people suffer from chronically. The drugs that are currently used to treat it are accompanied by various complications. The present study aimed to assess the potentiation of pentobarbital hypnosis by Norfolk Island pine.

Materials and Methods: Hydroalcoholic extract and water, ethyl acetate and n-butanol fractions of Norfolk Island pine were administered intraperitoneally 30 minutes before pentobarbital injection. The time lapse from injection to the onset of sleep and sleep duration were recorded. In order to evaluate the nervous toxicity, live cell percentage was assessed using the 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide test (MTT), in pc12 nerve cells. The killing dose and LD₅₀ were also assessed.

Results: Hydroalcoholic extract and n-butanol fraction caused a significant decrease in the

interval between injection and the onset of sleep and sleep duration. LD₅₀ assessment was 4.8 g/kg. Hydroalcoholic extract and fractions had no toxic effects on pc12 cells.

Conclusion: The present study showed that Norfolk Island pine potentiates pentobarbital hypnosis without causing any toxic effects, and most of the hypnotic effects come from the n-butanol extract due to non-polar compounds.

Keywords: Sleep disorder, Diazepam, Norfolk Island pine, Sleep, pc12 nerve cell

HN10108420903

A comparison of the effects of dry cupping and acupuncture on the women with postpartum lower back pain

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Objectives: Postpartum Low Back Pain (PLBP) affects more than half of the women population. This study aimed to evaluate the full effects of acupuncture branches, on postpartum low back pain severity among the primiparous subjects. Selected educational centers affiliated to Shiraz University of Medical Sciences, Shiraz, Iran were chosen as suitable locations to carry out the experiment.

Materials and Methods: This clinical trial was conducted on 150 cases in 2012; with the cases grouped in three equal groups of 50. Cupping therapy was done every other day in four 15-20 minute sessions a week. The acupuncture treatment was applied as according to the circular model for 20 minutes. Patients then filled out the short form McGill Pain Questionnaire. The collected data were then analyzed using the SPSS statistical software, (v. 16) repeated measurements and Chi-square tests.

Results: In the cupping group, mean differences of postpartum Low Back Pain intensity reached from 31.8±10.8, before the intervention, to 9.0±6.7, 7.5±6.6, and 4.1±3.6 immediately, 24 hours, and 2 weeks after the intervention, respectively and the results of repeated measures.

ANOVA showed significant differences between the three follow-up periods ($p < 0.05$). On the other hand, this measure reached from 31.1 ± 11.0 before the intervention to 22.1 ± 7.3 , 16.2 ± 6.0 , and 11.7 ± 5.3 immediately, 24 hours, and 2 weeks after the intervention, respectively in the acupuncture group.

Conclusion: The study results showed that these modalities were effective in sedating the pain. Therefore, they could be applied as a capable form of treatment for reducing lower back pain.

Keywords: Dry Cupping, Acupuncture, BL23, Low Back Pain, Postpartum

HN10104580320

A study of the effect of aloe vera extract on the common peroneal nerve histological structure in male diabetic rats

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Objectives: It has reported that aloe vera has protective effects on diabetic disorders. The present study was undertaken to evaluate the protective effect of aloe vera extract on sciatic nerve of diabetic rats.

Materials and Methods: A total of 45 adult male rats (220-250 grs) were divided into three groups, i.e., control, diabetic control and diabetic, which received aloe vera (50 mg/kg). Diabetes was induced by intravenous injection of 50 mg/kg streptozotocin. After eight, twelve and sixteen weeks, samples were taken from proximal, middle and distal of sciatic nerve. Structural changes in the sciatic nerve histomorphometric studies were reviewed and data were recorded. The obtained data were analyzed using SPSS.

Results: The results showed that the diameter of sciatic nerve axon and myelin decreased in diabetic rats. Our findings indicated that aloe vera as a therapeutic approach can protect histomorphologic alterations induced by peripheral diabetic neuropathy.

Conclusion: Our findings indicated that aloe vera as a therapeutic approach can protect

histomorphologic alterations induced by peripheral diabetic neuropathy.

Keywords: Aloe vera, Common peroneal nerve, Diabetes, Diabetic neuropathy, Rat

HN10106920614

Effects of humor therapy on blood pressure in patients undergoing hemodialysis

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Objectives: One of the problems of the health care society in the twenty first century is the increasing prevalence of chronic diseases and their treatment complications. One of these diseases is chronic renal failure treated with hemodialysis, and it is of great importance to find a safe and low-cost way to control its complications. Laughter therapy is one of the low cost and low risk techniques that can be used to treat these patients. The present study was performed to evaluate the effects of laughter therapy on blood pressure of patients undergoing hemodialysis in Bu Ali Sina Hospital in Qazvin.

Materials and Methods: This study was performed as a one group clinical trial (before and after intervention), with 26 female and 14 male participants. Blood pressure was measured using mercury sphygmomanometers. Laughter therapy was through playing CDs containing comic shows to patients for sixteen 30-minute sessions (2 times a week for 8 weeks). Data was analyzed using the SPSS (ver. 16) software.

Results: Laughter therapy has positive effects on blood pressure of patients undergoing hemodialysis ($p < 0.001$).

Conclusion: Humor therapy is effective for decreasing blood pressure of patients undergoing hemodialysis.

Keywords: Humor therapy, Blood pressure, Hemodialysis

HN10102460167

Treatment of vaginal atrophy in the Iranian traditional medicine

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Objectives: Vaginal atrophy is a significant complication of menopause, affecting 50% of post-menopausal women. Common symptoms of vaginal atrophy include dryness, dyspareunia and itching. Iranian Traditional Medicine (ITM) is the ancient medical system with 6000 years of history in Persia, in which Iran was the most important state. Guidelines of ITM mainly revolve around the humoral system of the body. This study aimed to review the literature of ITM in order to discover the traditional methods used for the treatment of vaginal atrophy.

Materials and Methods: In this study, references of ITM written in the common scientific language of the time, Persian and Arabic, were reviewed, and keywords on the definition of vaginal atrophy were extracted from two important ITM references: *Tib-e- Akbari* and *Exire- Azam*. Moreover, other reference books belonging to 10-19th century were reviewed.

Results: According to the ITM literature, the main causes of vaginal atrophy were uterine dryness (*jafaf-e-rahem*), vaginal dryness (*jafaf-e-ghobol*) and menstrual disruption (*Ehtebas-e-tamth*). Among other causes of vaginal atrophy were vaginal stiffness (*solb-e-rahem*) and infertility (*aghar*). Moreover, herbal remedies suggested for vaginal atrophy were reviewed using keywords in ITM manuscripts, especially in the references of remedies (Mofradat) and treatments (Moalejat), including *Makhzan ul-Advia*, *al-Abniya-an al-Haghayegh al-Advieh*, *Tuhfat al-Momenin*, *Gharabadin-e-Kabir*, *Gharabadine Shafae*,

Tib-e- Akbari and *Exire-Azam*.

Conclusion: In this study, we organized detailed lists of herbal remedies and combinations used orally, or in the form of vaginal suppositories, for the treatment of vaginal atrophy. Moreover, comparative tables including the scientific names of plants, as well as their active components and mechanisms, were presented to show the results of recent studies and phytotherapy researches about the ancient remedies of ITM.

Keywords: Vaginal atrophy, Menopause, Iranian traditional medicine, Phytotherapy

HN10107610832

The effect of fish oil on primary dysmenorrhea

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Objectives: Primary dysmenorrhea is one of the most common complaints of women, which is known as painful menstrual cycle in the absence of a demonstrable pelvic disease before or during menstruation. The prevalence of dysmenorrhea is reported in various societies to be between 50 and 90%. In Iran, the prevalence of this disease is reported to be between 74 and 86.1%. Primary dysmenorrhea affects the quality of life in women and causes disabilities in severe cases, which can be seen as not being able to go to school or work. This matter will have adverse social and economic effects on the society. According to the side effects of chemical drugs and the status of complementary medicine, we aim to evaluate the effects of fish oil on primary dysmenorrhea.

Materials and Methods: The data were extracted from reliable articles on scientific websites such as sid and PubMed.

Results: Fish oil is one of the food supplements, which can lead to production of prostacyclin, and decreasing the severity of dysmenorrhea. Including more Omega-3 fatty acids in our diet increases their entry into the cell. According to the previous studies, consuming fish oil during

menstrual cycle leads to production of second series prostaglandins (PGE2, PGI3, TxA2), which reduces vasoconstriction uterine myometrium contraction. This matter causes less ischemia and therefore, less pain. According to one study, after two months of treatment with fish oil, the severity of pain and the average duration of pain in the fish oil group was significantly decreased, as compared to the placebo group ($p < 0.05$). According to other studies, the frequency of severe dysmenorrhea was decreased from 50% before treatment to 21.25% after treatment with fish oil capsules ($p = 0.0001$). Based on another study, the severity of pain had decreased to 3.5 ($p < 0.05$) in the group receiving Omega-3. Based on another article, consuming fish oil leads to a significant decrease in pain in lower parts of back and stomach ($p < 0.05$).

Conclusion: According to the studies, fish oil is effective in relieving dysmenorrhea. Therefore, consuming fish oil supplements, as well as encouraging patients to increase fish oil consumption by health care personnel are recommended.

Keywords: Fish oil, Omega-3 supplement, Primary dysmenorrhea

HN10102170080

Effects of therapeutic massage on metabolic control indicators in patients with type II diabetes

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Objectives: Diabetes is a growing epidemic, resulting in significant mortality and morbidity. Individuals diagnosed with diabetes can improve their clinical outcomes through good metabolic control. Considering the fact that achieving metabolic control is very difficult,

use of complementary treatments, in addition to regular medicines, is recommended. Therapeutic massage is a complementary treatment method, the effects of which on diabetic patients have been rarely studied. This study aimed to evaluate the effects of massage on metabolic control indicators in patients with type II diabetes.

Materials and Methods: In this randomized clinical trial, 50 women with type II diabetes were divided into case and control groups via randomized blocking method. The case group received 10 sessions of 30-min therapeutic massage, while the control group received usual care. Inter-group and intra-group changes in the level of metabolic control indicators (e.g., glycated hemoglobin, lipid profile, blood pressure and body mass index) were evaluated by paired t-test and multivariate analysis of variance.

Results: Changes in glycated hemoglobin [7.18 (0.14) vs. 8.06(0.22)] ($p < 0.01$), systolic blood pressure [104.61 (3.25) vs. 118.35 (3.26)] ($p = 0.001$), diastolic pressure [68.47(1.34) vs. 77.47 (2.21)] ($p = 0.001$) and body mass index [28.47 (0.85) vs. 29.34(0.85)] ($p = 0.001$) were significant in the case group. The multivariate analysis of variance showed a significant difference between the groups in terms of mean changes in glycated hemoglobin ($p = 0.001$), systolic pressure ($p = 0.001$), diastolic pressure ($p = 0.001$) and body mass index ($p = 0.008$). The lipid profile was not significantly different between the groups, either before or after the intervention.

Conclusion: Therapeutic massage could lead to improvements in metabolic control indicators in patients with type II diabetes.

Keywords: Massage, Metabolic indicators, Type II diabetes, Women

HN10105200369

Effects of fennel on serum hormone levels in students with polycystic ovary syndrome

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Objectives: Polycystic ovary syndrome (PCOS)

is a disorder, accompanied by oligomenorrhea or amenorrhea. This condition is diagnosed by hyperandrogenic clinical results or laboratory findings. There are two major criteria for determining PCOS: lack of ovulation and hyperandrogenism, which are confirmed by clinical or laboratory findings. In addition to chemical treatments, the effects of herbal medicines, e.g., fennel, on PCOS treatment have been confirmed in resources such as the “Canon of Medicine” and other traditional Iranian resources.

Materials and Methods: This clinical trial was conducted on 30 female students, living in dormitories of Jahrom University of Medical Sciences. The subjects were randomly divided into intervention and control groups. Hormone tests were carried out before and after the intervention. The intervention group received 46 mg fennel capsules twice a day, while the placebo group received 100 mg paraffin capsules in the same manner for 90 days.

Results: The intervention and control groups were similar in terms of demographic data ($p=0.739$) and hormone levels before the intervention. The serum levels of follicle stimulating hormone (FSH), luteinizing hormone (LH), dehydroepiandrosterone sulfate (DHEAS) and thyroid stimulating hormone (TSH) were analyzed, using Mann-Whitney U test before and after the intervention. No statistical difference was reported after three months of intervention ($p=0.298, 0.178, 0.641$ and 0.021 , respectively).

Conclusion: The results showed that edible fennel supplements did not cause any changes in serum hormone levels with the exception of FSH.

Keywords: Fennel, Hormone, Polycystic ovary syndrome

HN10108991034

Effects of curcumin on the prevention and treatment of mucosal inflammation caused by radiation therapy in patients with head and neck cancer

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Objectives: Oral mucositis is a common complication caused by radiation therapy in patients with head and neck cancer, which has debilitating effects on the quality of life. Different methods have been applied for the prevention and treatment of oral mucositis and reducing the severity of this problem. However, no definitive treatments are available yet. Since natural compounds are associated with fewer side effects compared to chemical and synthetic drugs, they could be experimented and used for the treatment of oral mucositis in cancer patients. Curcumin is a derivative compound obtained from turmeric with several biological and pharmacological properties, as well as antioxidant, anti-inflammatory and anti-cancer effects. This study aimed to investigate the effects of curcumin on the prevention and treatment of oral mucositis caused by radiation therapy in patients with head and neck cancer.

Materials and Methods: This double-blinded, clinical trial was conducted on 32 patients undergoing radiation therapy for head and neck cancer at the Oncology Department of Omid Hospital, affiliated to Mashhad University of Medical Sciences, and Reza Health Care Center in 2014. Patients who met the inclusion criteria were enrolled in this study and were randomly divided into two groups of control and experiment. Dietary nano-micelle curcumin (80 mg capsules) were prescribed for the experimental group, and control subjects received placebo (lactose pills) daily during six weeks in the process of radiation therapy. Patients were examined weekly according to the National Cancer Institute (NCI) Common Toxicity Criteria (CTC) (V2) to evaluate the incidence and severity of mucositis. Data analysis

was performed using SPSS V.16, Kolmogorov-Smirnov test, independent t-test, Chi-square test, Mann-Whitney test and Friedman's test.

Results: In this study, 19 male and 13 female patients with the mean age of $59.1814.85 \pm$ were investigated. All subjects were homogenous in terms of age, gender, history of smoking, dental condition, radiation dose, tumor type, tumor location and body weight. During the study, two patients at the 4th week and one patient at the 5th week were excluded from the study, and 29 patients continued therapy. In the experimental group, severity of oral mucositis was significantly lower compared to the control group during all the session of radiation therapy. In addition, all patients in the control group developed mucositis, while only 43.8% of experimental subjects showed symptoms of mucositis at the second week of therapy. In this regard, there was a significant difference between the two study groups ($p=0.002$), and curcumin nano-micelles were reported to cause no oral complications.

Conclusion: According to the results of this study, use of curcumin nano-micelles could delay the incidence of mucositis and diminish the severity of this problem. Moreover, curcumin was observed to cause no complications in the patients. Therefore, curcumin nano-micelles could be used for the prevention and treatment of mucositis in patients with head and neck cancer undergoing radiation therapy. It is recommended that future studies with large sample sizes be conducted to evaluate the exact effects of this herbal medicine on mucositis.

Keywords: Curcumin, Mucositis, Radiation therapy, Head and neck cancer

HN10107340674

Description of cardiotonics and their mechanisms of action in traditional Iranian medicine

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Objectives: Cardiotonics are traditional medicinal agents with a widespread use. There is a strong emphasis on these agents for the prevention and treatment of cardiac diseases. In this study, we aimed to explain the definition of cardiotonics and their mechanisms of action from the viewpoint of traditional Iranian medicine.

Materials and Methods: In this library review, modern medical references, major resources of traditional Iranian medicine including the "Canon of Medicine", "Al-Resaleh fi al-Adviyah al-Ghalbyah", "Makhzan al-Adviyah", "Gharabadin-e-Kabir", "As-Shamel fi as-Sina'a at-Tibbiyya" and "Daruha-yi Qalbi" (cardiac drugs) and databases including Google Scholar and PubMed were searched.

Results: Based on the definition proposed by traditional Iranian medicine, cardiotonics possess special properties, which can increase cardiac efficacy and performance. Strengthening the heart takes place with the adjustment of consistency and temperament of the vital spirit and heart. Two main features of most cardiotonics are astringent properties and fragrance, which fortify the vital spirit and heart.

Conclusion: The mechanisms of traditional cardiotonics can be evaluated via modern assays, considering the abundance and diversity of cardiotonics in traditional medical resources. Novel cardiotonics can be proposed and addition of a variety of simple and safe cardiotonics to the diet can prevent cardiac diseases. Moreover, some of these agents can be prescribed as adjuvants.

Keywords: Cardiotonics, Traditional Iranian medicine, Temperament, Spirit

HN10108740972

The effects of garlic extract (ajoene) on platelet activity

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Objectives: Based on the literature, garlic has numerous health benefits such as anticoagulant properties. Ajoene, which is the main compound of garlic, is an anticoagulant substance, extracted from the alcoholic extracts of this species.

Materials and Methods: Twenty diabetic patients were selected in this study. Platelet rich plasma was applied in patients, along with thrombin (first group) and a combination of garlic extract and thrombin (second group). Then, platelet aggregation was measured in both groups, using an aggregometer.

Results: The results obtained by the aggregometer showed a reduction in platelet aggregation in the second group.

Conclusion: Based on the findings, garlic inhibits fibrinogen receptors. In fact, ajoene interferes with the binding of fibrinogen to its receptor, i.e., GPIIb/IIIa (CD41/61), inhibits the platelet from coagulation and prevents venous thrombosis.

Keywords: Ajoene, Fibrinogen receptor, Platelet aggregation, Type II diabetes mellitus

the living underground rhizome or tap root of several species of *Ferula*. *Asafoetida* is used in traditional medicine for the treatment of a variety of disorders.

Materials and Methods: Different databases were searched, using keywords such as “smooth muscles”, “relaxant effects” and “*F. asafoetida*” to retrieve relevant published articles.

Results: *Asafoetida* is used as a spice in folk medicine to treat several diseases including intestinal parasites, gastrointestinal disorders, asthma and influenza. A wide range of chemical compounds including sugar, sesquiterpene coumarins and polysulfides have been isolated from this plant. This oleo-gum resin has been known to possess antifungal, anti-diabetic, anti-inflammatory, anti-mutagenic and antiviral activities. Several studies have investigated the effects of *F. asafoetida* gum extracts on contractile responses, induced in various smooth muscles by acetylcholine, methacholine, histamine and potassium chloride.

Conclusion: The results showed that *F. asafoetida* gum has a relatively potent relaxant effect on various smooth muscles, which may be of therapeutic importance in several diseases. Therefore, further clinical studies on various effects of *F. asafoetida* and its main constituents are recommended.

Keywords: *Ferula asafoetida*, Extract, Oleo-gum-resin, Smooth muscle, Relaxant effect

HN10105930472

The relaxant effects of *Ferula asafoetida* on smooth muscles and the possible mechanisms

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Objectives: *Asafoetida* (*Ferula asafoetida* or *F. asafoetida*), an oleo-gum-resin, belongs to the Apiaceae family and is obtained from

HN10104300338

Reproductive health in perspective of Iranian Traditional Medicine and its comparison with classic medicine

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Objectives: Maternal health care in pregnancy is one of the most important ways to maintain maternal and fetal health. Traditional medicine have proposed simple health-promoting and functional instructions during pregnancy and the aim of this study was to summarize these instructions and compared and contrasted with classic medicine.

Materials and Methods: This article is a review and library study in the field of "traditional medicine". The main resource textbooks of traditional medicine and new studies have been evaluated and the findings of scientists of classic medicine were compared with those of traditional medicine, and new researches on lifestyle during pregnancy were reviewed in Google Scholar, Pubmed, Magiran, SID, Irandoc, and Iranmedex databases.

Results: Traditional medicine has considered pregnancy is distinct from other life periods and has offered specific measures in this period. General measures of pregnancy have been provided on the principles of nutrition, sexual intercourse, physical activity, bathing and mental and emotional status and lifestyle during pregnancy.

Conclusion: There are various and effective instructions in the field of prenatal care in the doctrine of traditional medicine that is often not considered from the perspective of modern medicine. Paying attention to these points can have a significant impact on the effectiveness of prenatal care.

Keywords: Iranian Traditional Medicine, Prenatal care, Pregnancy, Health

HN10105820529

Evaluation of access to the course of *Hakim*

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Objectives: In this study, we evaluated the

access to educational courses in traditional medicine for training committed and proficient healthcare workers by utilizing their information, experience and guided orientations regarding educational contents.

Materials and Methods: In this cross-sectional study, we reviewed educational courses including "Uyun Al-Anba'fi Tabaqat Al-Atibba", "Meftahoteb and Menhaajo Tolab", "Fi Bayane Hajate ela al-Teb va Ateba va Vasayahom", "Kamel al-Sanaah al-Tibbiyah" and "Kholasat al-Hikmah" (13th century AH). Subjects with specified titles were codified.

Results: Use of knowledge lays the groundwork for learners' scientific analysis, implementation, recognition, innovation and expansion of common sense. Sciences included in trainings were morality and subjects focusing on mental acuity and vibrancy to understand the relationship between phenomena, detect effective factors in different situations and form logical reasoning. Indispensable scientific fields included jurisprudence, morality, wisdom, logic, physics (*Tabiyat*), geometry, astrology, astronomy, math, "Kayhanat" and physiognomy. Overall, limitations in the use of these scientific fields depend on the required medical knowledge, based on the principles and laws. Awareness of the influence of metaphysical factors in treatment is highly important. By taking advantage of these scientific fields, we can apply them for achieving more competence.

Conclusion: Emphasis on the context is representative of the necessity of enhancing skills in disease prevention, diagnosis and treatment. Re-evaluation of textbook headlines and educational contents and considerations for achieving *Hakim's* principles are required for educational planners.

Keywords: Course, Medical education, Traditional

HN10109211065

Evaluation of the reasons behind the use of traditional medicine from the perspective of Mashhad medical students

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Objectives: Complementary and alternative medicine (CAM) refers to a set of medical treatments. A large portion of CAM falls outside the mainstream healthcare. Traditional medicine is one of the branches of complementary medicine, and recent studies have shown a growing increase in the use of traditional medicine. Therefore, this study was conducted to determine the reasons behind the use of traditional medicine among medical students.

Materials and Methods: This descriptive, cross-sectional study was conducted on 105 medical students (students of basic sciences, physiotherapy, stager and internship). For data collection, a researcher-made questionnaire was applied. Its reliability was approved by researchers and its validity was approved by Cronbach's alpha. Data were analyzed using SPSS version 16.

Results: In this study, 27.6% of subjects were male. Overall, 70.5% of students had used traditional medicine treatments for themselves or their family members. The most commonly used treatment methods were respectively as follows: herbal treatments (61.9%), bloodletting (29.5%) and leech therapy (8.6%). According to the results, 70.5% of subjects considered traditional medicine as a scientific approach, while 65.2% regarded it to be holistic. Also, 44.8% of participants believed that traditional medicine is applied due to lack of response by common treatments and its low costs (59.6%). Moreover, 24.8% of subjects believed in the placebo effect of traditional medicine, and 76.2% believed that its long history is one of the causes behind the use of traditional medicine. Only 18.3% of students confirmed the lack of side-effects in traditional medicine.

Conclusion: According to the mentioned findings, it can be concluded that this branch is still widely applied by the students themselves or their families, despite the common knowledge about the side-effects of traditional medicine. Based on the results, the cause of traditional medicine application is its long history and its origin in our culture.

Keywords: Culture, Side-effects, Traditional Iranian medicine

HN10102770276

Evaluation of the effects of bloodletting on the blood pressure of patients with hypertension

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Objectives: According to statistics, about 30% of the adult population in the U.S., as well as 17.5% of the people within the age range of 15-65 years in Iran, suffer from hypertension. However, 54% of these patients do not follow their treatments. Complementary medicine and bloodletting could be effective in the alternative treatment of hypertension.

Materials and Methods: This quasi-experimental study was conducted on 50 patients with hypertension. Subjects were selected by purposive sampling and divided into two groups of control and treatment. Patients in the treatment group underwent bloodletting, and no interventions were performed in the control group. In addition, both groups received medication therapy. Level of hypertension was evaluated by descriptive and inferential statistics in both groups.

Results: In this study, mean of systolic blood pressure was 125 and 101 mmHg before and 10 minutes after the intervention, respectively. In addition, mean of diastolic blood pressure was estimated at 85 and 77 mmHg before and after bloodletting, respectively. No significant differences were observed between the groups in terms of systolic and diastolic hypertension ($p < 0.05$).

Conclusion: According to the results of this study, changes in the ratios of systolic and diastolic hypertension were more significant in patients undergoing bloodletting. Therefore, bloodletting could be effectively used as a complementary approach for the treatment of patients with hypertension.

Keywords: Systolic blood pressure, Diastolic blood pressure, Bloodletting

HN10106930948

Liver health care in Iranian traditional medicine

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Objectives: Liver is considered a major organ that is able to perform almost 500 vital functions. Based on Iranian traditional medicine (ITM), it is one of the three principal organs. Given its critical role in both traditional and modern medicine, liver health care requires special attention. Lifestyle modification is the most effective factor in liver disease management in modern medicine. Similarly in ITM, the first step in the treatment of liver disease is following the six essential principles of healthcare put forth by Sette Zarurie; the most important of them being food and exercise.

Materials and Methods: In this study, the terms “Kabed”, “Jegar” (liver) and “hefuz-al-sehe” (liver Health care) were searched for in ITM traditional manuscripts.

Results: For liver’s optimum function, various factors leading to liver dysfunction should be avoided e.g., drinking cold water especially during meals, eating foods such as pasta, rice, beef and unleavened bread, improperly grilled food especially burned or raw, eating while having no appetite, chewing food improperly, heavy exercise before food digestion. Some food ingredients like chickpea, olive, saffron, curcumin, cinnamon and fruits such as apple, quince and grape can protect liver.

Conclusion: Many of these findings are in accordance with modern studies. Some other ITM recommendations need further investigation.

Keywords: Liver, Health Care, Iranian Traditional Medicine

HN10104120283

Survey the effect of acupuncture for treatment of primary dysmenorrhea

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Objectives: Dysmenorrhea, or painful menstruation, affects 60% of women at the menstrual age and may occasionally cause temporary disabilities. Use of nonsteroidal anti-inflammatory drugs is considered as the main treatment for dysmenorrhea. Other treatment methods include the use of birth control pills, acupuncture, electrical nerve stimulation of the skin (TENS) and psychotherapy. Since 80% of dysmenorrhea cases are successfully treated with medication therapy, and given the potential risks of this disorder, this study aimed to investigate the effects of acupuncture on the treatment of primary dysmenorrhea.

Materials and Methods: This prospective interventional study was conducted on women ageing >25 years with primary dysmenorrhea referring to Imam Reza Hospital of Mashhad, Iran. All subjects met the inclusion criteria and received acupuncture since 2 days before up to 3 days after their menarche (5 days in total). Intervention was performed in three consecutive sessions by a specialist at the Department of Chinese Medicine. Effects of acupuncture on primary dysmenorrhea were evaluated with the comparison of visual analog scale (VAS) pain, absence from work before treatment, one month after the beginning of treatment and one month after the treatment was completed. In all statistical tests, $p < 0.05$ was considered as significant.

Results: In this study, mean of pain scores before treatment, one month after the beginning of acupuncture, and one month after the treatment was 63.60, 18.47, and 8.45, respectively. In addition, mean of VAS reduced by 55.15% one month

after the treatment compared to before treatment, which confirmed the significant effectiveness of acupuncture in reducing pain. Also, rate of absence from work one month after the acupuncture treatment significantly decreased among the subjects compared to before treatment ($p=0.000$).

Conclusion: According to the results of this study, acupuncture could relieve primary dysmenorrhea after three consecutive sessions of treatment, and the effects continued even after the completion of treatment. Therefore, this method could be used as an alternative approach for the treatment of patients with drug-resistant primary dysmenorrhea.

Keyword: Curcuma Longa, Traditional Medicine, Curcumin

HN10104680354

A comparison of the effects of saffron and diazepam in reducing anxiety before herniorrhaphy surgery in Gonabad during 2011-2012

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Objectives: The aim of the present study was comparing the effects of dried Saffron with of diazepam in reducing anxiety before herniorrhaphy surgery.

Materials and Methods: In this double-blind clinical trial, 102 patients aged between 5-18 years, were studied for ten months in 15th Khordad Hospital

of Gonabad during 2011-2012. Samples were chosen randomly based on the goal of our study. Then, according to the table of random numbers, they were divided into intervention and control groups. For the intervention group, 25 mg of dried saffron, and 5mg of diazepam for the control group was prescribed three hours before herniorrhaphy surgery. Patients filled the Spielberger anxiety questionnaire before consuming the drug and immediately after entering the operating room. Data were analysed using Spearman statistical test, Pearson correlation coefficient, and T-student test.

Results: The amount of hidden anxiety decreased in the intervention group after consuming the drug (from 34.51 ± 7.4 to 34.72 ± 7.45), and it increased in the control group (from 34.51 ± 10.74 to 69.97 ± 38.8) ($p < 0.05$). Paired t-test showed a significant statistical difference in diazepam group before and after the intervention ($p=0.007$), also, in the Saffron group before and after intervention ($p=0.046$). In addition, there was a significant statistical difference in both Diazepam and Saffron groups after the intervention ($p=0.019$), that is, anxiety in the Saffron group was less than the diazepam group.

Conclusion: According to the results of our study, Saffron dried extract can be used as an effective prodrug in decreasing anxiety, especially before surgery.

Keywords: Anxiety before surgery, Diazepam, Herniorrhaphy, Saffron

HN10103930708

A comparison between ghamz therapy in traditional Iranian medicine and shiatsu in traditional Chinese medicine

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Objectives: "Ghamz therapy" in traditional

Iranian medicine refers to applying pressure on some parts of the body in order to diagnose, treat or prevent diseases. Shiatsu in traditional Chinese medicine includes applying pressure on some points of the body, leading to energy transfer and adjustment in specific routes. We aimed to compare these methods, considering the similarities in their mechanisms.

Materials and Methods: In this library study, we reviewed traditional Iranian and Chinese medicine resources.

Results: In traditional Iranian medicine, communication pathways have been introduced, which show the movement of substances in the body. "Ghamz therapy" facilitates the transfer of these substances, leading to a decrease in the severity of diseases by absorbing the substances, deviating the damaging flow and improving circulation in the affected member. In Shiatsu, transferring energy is accomplished through specific pathways, which are almost exactly similar to the paths introduced in traditional Iranian medicine. The base of treatment in Shiatsu is improving energy production and consumption and balancing the energy consumption in these pathways.

Conclusion: "Ghamz therapy" is one of the most popular non-drug treatments, considering its wide usage and immediate effects on pain reduction. However, no specific regulations have been introduced as how to perform this method in Iranian medicine literature. Based on the familiarities between "Ghamz therapy" and Shiatsu in terms of mechanisms and other principles, the two can be considered equivalent, and the principles of Shiatsu can be used to classify this part of traditional Iranian medicine.

Keywords: Ghamz therapy, Acupressure, Shiatsu, Massage, Traditional Iranian medicine

HN10105180368

Curcumin as an anticonvulsant: a systematic review

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Objectives: Epilepsy is a neurological disease of the central nervous system that it is estimated that about 70 million people worldwide suffer from this chronic disorder. Recently herbal medicine becomes more famous for treating intractable form of epilepsy. This study aimed to evaluate the efficacy and safety of curcumin as an anticonvulsant drug.

Materials and Methods: a systematic web base search was conducted in Cochrane Library and MEDLINE up to December 2014.

Selection criteria: We included articles with available abstract in English language. Manual searching was done within the reference list of articles. Two reviewers independently reviewed and assessed eligibility criteria, assessed quality, and extracted data.

Results: Curcumin is derived from Turmeric and its anti-oxidant activity has been confirmed in many studies. The role of oxidative stress in convulsion is established. Curcumin might inhibit the onset of seizure or prolong the interval between attacks. Curcumin can modulate in nitric oxide formation and free radicals syntheses.

Conclusion: Anticonvulsant effect of Curcumin confirmed by various animal model studies.

Keywords: Epilepsy, Curcumin, Anticonvulsant

HN10100420143

Efficacy and safety of herbal therapies of Iranian traditional medicine for constipation during pregnancy: a review

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Objectives: Constipation is a common complaint during pregnancy. Iranian Traditional Medicine (ITM) has some recommendations for this complaint. In this study, treatments of constipation in pregnancy have been presented and their efficacy and safety evidence from modern literature were reviewed.

Materials and Methods: Treatments were identified based upon sources related to health protection of pregnant women in ITM literature. Then, a literature search was performed in the scientific databases covering articles published up to March 2014. Articles focusing on safety or efficacy of the selected herbs during animal or human pregnancy were selected.

Results: Folus (*Cassia fistula*), Shir-khesht (*Cotoneaster nummularia* Fisch.), Tamarind (*Tamarindus indica*), Taranjabin (*Alhagi camelorum*), Damask rose (*Rosa damascene*) and almond oil are the most recommended medications for constipation in pregnant women. For all of these herbs, there is some efficacy evidence in animal or human studies. Folus is forbidden during pregnancy due to its anthraquinones ingredients. Shir-Khesht was deemed safe in a study on treatment of constipation in pregnant women. The efficacy of the rest of the above herbs has not been evaluated for constipation during pregnancy. There is limited evidence to provide safe advice for consuming these herbs for constipation during pregnancy.

Conclusion: Although there are some animal and human studies suggesting the laxative effect of ITM interventions, their safety is not sufficiently documented in modern literature. Scientific studies regarding these herbal remedies during pregnancy are warranted to determine safety.

Keywords: Iranian Traditional Medicine, Constipation, Pregnancy, Herbal medicine

HN10101070045

Preparation and evaluation of vaginal cream containing extracts of *Linum usitatissimum*, *Foeniculum vulgare* and *Salvia officinalis*

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Objectives: Vaginal atrophy is one of the potential postmenopausal problems, characterized by decreased epithelial thickness, reduced vaginal maturation index and increased vaginal pH. Due to the possible adverse effects of the long-term use of hormone replacement therapy (especially the increased risk of thromboembolic accidents, stroke and breast cancer) reported from large, prospective studies, phytoestrogens can be used as an alternative for the vaginal atrophy treatments. The aim of this study is to evaluate the physicochemical properties and stability of vaginal cream containing well-known phytoestrogen herbs: *Linum usitatissimum*, *Foeniculum vulgare* seeds and *Salvia officinalis* aerial part extracts.

Materials and Methods: Release study was carried out according to the permeated amount of total flavonoid, which is determined by using Aluminum chloride colorimetric method.

Results: Release test's result showed that release rate of extract from F2 and F3 was slower than F1. It can be attributed to the lower viscosity of F1 and also to the higher hydrophilic nature of F2 and F3. The PEG existed in the F2 and F3 increasing the hydrophilicity of the formulation, leading to higher tendency of hydrophilic flavonoid extracts to the base and decreasing the liberation of extract from the formulation.

Discussion: The w/o nature of the formulations give them the potential for lubricating or moisturizing the vaginal epithelium, which can aid with reducing vaginal atrophy symptoms. It may be suggested

that F1 formulation is a proper alternative for the currently available treatments for vaginal atrophy. However, further clinical studies are required to evaluate the efficacy of this herbal vaginal cream in alleviating vaginal atrophy symptoms.

Keywords: Complementary medicine, Fennel, Flax seed, Phytoestrogens, Sage, Vaginal atrophy

HN10106380520

Pumpkin extract improves dyslipidemia in diet-induced obese rats

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Objectives: Nowadays obesity is the most common metabolic disorder in humans and is considered a risk factor for cardiovascular disease, diabetes, hypertension, osteoarthritis, and depression. Prevention and treatment of obesity is a way to reduce its complications. In recent years natural products, plants, and herbal medicine have been increasingly used in different countries. One of these plants is pumpkin with different properties such as antibacterial, antioxidant, anti-cancer, lipid-lowering, anti-calculus, and anti-diabetic. The aim of this study was to assess the anti-obesity effects of pumpkin in diet-induced obese rats.

Materials and Methods: In this study 25 adult male *Wistar* rats were randomly divided into 5 groups (n=5) as follows: (1) healthy control, (2) dietary fatty control rats, and (3), (4) and (5) experimental dietary fatty rats that received hydro-alcoholic extract of pumpkin once daily at doses of 100 and 200 and 400 mg/kg, respectively. At the end of the treatment period (6 weeks), serum levels of LDL, HDL, triglyceride, and glutathione were measured.

Result: Consumption of pumpkin in a dose-dependent manner dramatically decreased triglycerides and LDL, while HDL was markedly increased in treated groups. Pumpkin also increased glutathione levels in comparison with the obese control group. Six week administration of pumpkin dramatically decreased weight in

treated groups in a dose dependent fashion.

Conclusion: This in vivo study demonstrated that pumpkin ameliorated oxidative stress and dyslipidemia in obese rats, leading to decreased cardiovascular disease risk. Our data suggests a potential therapeutic strategy for obesity and its related complications.

Keywords: Obesity, Pumpkin, Glutathione, Lipid profile

HN10104360585

Comparative study of two treatment strategies using *fumaria officinalis* against acetaminophen-induced hepatotoxicity

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Objectives: Hepatoprotective effects of medicinal plants with antioxidant properties have been confirmed in various studies. Considering the importance of drug-induced hepatotoxicity as a major cause of liver damage, we aimed to investigate the protective and therapeutic effects of *Fumaria officinalis* extracts against acetaminophen-induced hepatotoxicity in rats.

Materials and Methods: In total, 35 adult male *Wistar Albino* rats were randomly divided into seven groups: 1) healthy control group, 2) positive control group (intraperitoneal injection of 150 mg/kg of acetaminophen), 3) hepatotoxic rats treated by *Silybum marianum* (100 mg/kg) once per day, 4) hepatotoxic rats receiving the aqueous extracts of *fumaria* (250 mg/kg) once per day for two weeks, 5) hepatotoxic rats receiving the aqueous extracts of *fumaria* (500 mg/kg) once a day for two weeks at the time of acetaminophen injection, 6) protective experimental rats treated by the aqueous extracts of *fumaria* (250 mg/kg) once

per day before drug injection, and 7) protective experimental rats receiving the aqueous extracts of fumaria (500 mg/kg) once daily before drug injection. For groups 6 and 7, after two weeks of oral treatment, acetaminophen was injected and treatment continued for two weeks. At the end of the treatment period, serum level of functional liver markers (e.g., alanine transaminase, aspartate aminotransferase, alkaline phosphatase and lactate dehydrogenase), lipid profile, malondialdehyde and total antioxidant capacity were measured. Data were analyzed, using one-way ANOVA.

Results: Fumaria could reduce the elevated levels of liver enzymes and improve lipid profile. Furthermore, this plant reduced lipid peroxidation and increased the total antioxidant capacity. The protective effects of fumaria in the prevention groups were notable, compared to therapeutic groups.

Conclusion: Our findings demonstrated that fumaria can exert protective and therapeutic effects on acetaminophen-induced hepatotoxicity in rats. This protective effect might be due to the presence of various flavonoids and should be considered while developing new agents for the treatment of hepatotoxicity.

Keywords: Antioxidants, *Fumaria officinalis*, Hepatotoxicity, Liver enzymes, Lipid profile

HN10101330043

Study of the effects of ofloxacin (211mg) on the thickness of spermatogenic epithelium pipes in adult male rats and the therapeutic effectiveness of royal jelly

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Objectives: Ofloxacin is an antibiotic of the fluoroquinolone drug class, used for alleviating diseases and infections of the urinary and reproductive systems. Royal jelly is a honey secretion from the hypopharyngeal glands of worker bees. The objective of this study was to investigate the effects of ofloxacin on the thickness of spermatogenic epithelium pipes and determine

the therapeutic effectiveness of royal jelly.

Materials and Methods: Overall, 22 adult male rats were evaluated in this study. The rats were divided into nine groups (study and control groups). Ofloxacin was administered via gavage in the study group (group 1). During a 14-day cycle, all three groups received 200mg of ofloxacin (0.3 ml). Group 2 was euthanized after a 14-day cycle, whereas group 3 was maintained for another 14 days (28 days) without receiving any medications after the end of the first cycle. Group 4 at the end of the first cycle received 14 days of treatment with royal jelly (28 days). Then, groups 3 and 4 after finishing medication and treatment cycles (28 days) were euthanized, and abdominal and testicular tissues were extracted. Tissue sections were stained with hematoxylin/eosin.

Results: The study showed that 211 mg of ofloxacin significantly reduced the thickness of spermatogenic epithelial pipes, compared to the control group. Moreover, royal jelly treatment made relative improvements in rats.

Conclusion: Ofloxacin significantly reduced the thickness of spermatogenic epithelial pipes and royal jelly treatment made relative improvements in rats.

Keywords: Adult male rat, Ofloxacin, Royal jelly, Testicles, Thickness of the epithelium

HN10107150733

The effect punica granatum flower (persian gulnar) syrup on uterine volume and menorrhagia in women with uterine leiomyoma: a case report

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Objectives: Uterine leiomyoma is a common

female problem, and menorrhagia is one of its main symptoms. In Iranian traditional medicine, Persian Gulnar (abortive flower of *Punica granatum* Linn) has long been applied for its hemostatic effects since a long time ago. Since most of the usual medical treatments are associated with adverse health conditions and side effects, this study was conducted to evaluate the effects of Persian Gulnar on uterine fibroids.

Materials and Methods: The patient was a 34-year-old woman diagnosed with uterine fibroids and menorrhagia with no response to conventional treatments. After performing the necessary examinations, the patient consumed 15 ml of Persian Gulnar syrup daily (5 ml three times a day) in the first 7 days of three consecutive menstrual periods. Blood volume was evaluated based on Pictorial Blood Loss Assessment Chart (PBAC), and the quality of life was assessed using the menorrhagia questionnaire. Also, ultrasound examination was performed before and after intervention.

Results: Bleeding score was decreased from 389 to 142 at the end of the study, based on PBAC. The number of days of menstrual bleeding was decreased from more than 10 days to 8 days. The quality of life score was reduced from 81.9 to 35.43. Also, uterine volume was decreased by 20.52% at the end of the study.

Conclusion: Persian Gulnar is a tannin containing astringent. Tannins are astringents that lead to capillary endothelial contraction and eventually a decrease in uterine bleeding. In this patient also, Persian Gulnar was effective in decreasing the bleeding caused by uterine fibroids, decreasing the size of the uterus, and improving the quality of life.

Keywords: Menorrhagia, Leiomyoma, Iranian traditional medicine, Persian Gulnar

HN10103710205

Effects of the hydroalcoholic extracts of *Cucurbita Maxima Duch* on motor coordination and avoidant scopolamine-induced memory impairment in rats

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Objectives: Considering the antioxidant effects of *Cucurbita Maxima Duch*, this plant can help neutralize free radical systems, reduce the level of reactive oxygen species in different regions of the brain and exert positive impacts on the brain. This study was performed to evaluate the effects of this plant on avoidant memory impairment and motor coordination.

Materials and Methods: Motor coordination was evaluated by rotarod device. The Shuttle Box test was used to determine passive avoidance memory. Rats were divided into the control group (intraperitoneal injection of distilled water), Scopolamine group (induction of memory impairment), the extract groups (50, 100 and 200 mg/kg, respectively) and the extract+Scopolamine groups (50, 100 and 200 mg/kg, respectively). Data were statistically analyzed, using one-way ANOVA and Tukey's test.

Results: The findings of rotarod test did not show a significant difference between the groups ($p < 0.05$). In the Shuttle Box test, Scopolamine caused memory impairment. Scopolamine-induced memory impairment was improved by different doses of the extract ($p < 0.05$). However, *Cucurbita Maxima Duch* extracts alone had no effects on avoidant memory impairment or motor coordination ($p > 0.05$).

Conclusion: The results of this study showed that *Cucurbita Maxima Duch* extracts could improve memory impairment caused by Scopolamine, although they could not affect normal memory or motor coordination.

Keywords: *Cucurbita Maxima Duch*, Avoidance Memory, Motor Coordination, Rotarod, Shuttle Box, Scopolamine

HN10103450342

Evaluation of anti-depression, antioxidant and motor coordination effects of *Cucurbita Maxima Duch* hydro-alcoholic extract in rats

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Objectives: In traditional medicine, *Cucurbita maxima Duch* is known as a sedating plant. In Islamic medicine, this plant is widely used for the treatment of depression. This study aimed to evaluate the anti-depression, antioxidant and motor coordination effects of this medicinal herb.

Materials and Methods: In this study, hydro-alcoholic extract of *Cucurbita maxima Duch* was prepared using maceration methods, and animals were divided into four groups. Control subjects received normal saline, and experimental subjects received the herbal extract at doses of 50, 100 and 200 mg/kg via intraperitoneal injection. Half an hour and one hour after the injection, anti-depressant effects of the extract were evaluated using the Forced Swimming Test (FST). In addition, motor coordination of the animals was measured half an hour after the injection using the RotaRod apparatus. Finally, the animals were killed and serum antioxidant capacity was measured. Data analysis was performed using ANOVA and LSD tests.

Results: In this study, FST results were indicative of a significant anti-depressant effect by the extract at doses of 100 and 200 mg/kg ($p < 0.01$). Moreover, Data from the Rota Rod test showed significantly higher motor coordination in rats receiving high doses of the herbal extract ($p < 0.01$). Evaluation of the antioxidant capacity indicated that serum antioxidant activity was significantly higher in the animals receiving *Cucurbita maxima Duch* at doses of 100 and 200 mg/kg compared to the control group ($p < 0.05$).

Conclusion: According to the results of this study, *Cucurbita maxima Duch* extract has remarkable anti-depressant and antioxidant properties. Furthermore, it could increase motor coordination in rats.

Keywords: *Cucurbita Maxima Duch*, Extract, Motor Coordination, Anti-oxidant activity.

HN10107800758

Comparing the effect of jujube with imipramine and fluoxetine in depression tests

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Objectives: Depression is a common disease with lots of complications. Based on the World Health Organization statistics, 350 million people around the world are suffering from depression. There are several treatment methods available for this disease, most of which are based on chemical drugs with various adverse side effects. Jujube is a kind of herb with several therapeutic features. According to the listed entries in the field of traditional medicine this herb, it seems to have positive effects on decreasing depression. In this study, we aim to evaluate the effects of Jujube on depression in rats.

Materials and Methods: In this interventional study, extraction was performed using maceration method. A total of 48 rats in the age range of 6-8 weeks with the average weight of 30-35 gr, were divided into eight groups of 6, including the control, 100, 200, and 400 dose of the extract, and groups receiving 30 mg/kg dose of Imipramine and 20 mg/kg dose of Fluoxetine. After intraperitoneal injection to rats, forced swimming test (the standard method for evaluating the level of depression) was individually taken from each sample. Testing each sample lasted for six minutes, the first two minutes was for the rat to adjust with the testing environment. In this test, the time of immobility was considered to be the sign of depression, and the swimming duration of the rats was considered the state of not having depression. After recording the times, data were analyzed performing ANOVA, using SPSS.

Results: According to the obtained results, it is determined that Jujube causes a decrease in the depression of studied rats in a dose-based manner ($p < 0.05$). In fact, the effect of 400 dose of Jujube

extract was more effective than fluoxetine, and the Imipramine groups showed the least amount of depression among the groups ($p < 0.05$).

Conclusion: Considering the results of this study, as was mentioned in the traditional medicine resources, Jujube can have antidepressant properties it can be used alongside with other drugs available for curing depression.

Keywords: Depression, Forced swimming, Jujube

HN10108860998

Evaluation and production of an attitude measurement instrument using the references of the Iranian complementary medicine

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Objectives: The present study aimed to designate an attitude-measurement instrument in order to evaluate the public inclination towards the use of complementary medicine in the treatment of different diseases.

Materials and Methods: Since an attitude-measurement tool is not available in Iran, the researchers reviewed and summarized several articles published in other languages, extracting 29 key elements for planning a questionnaire. Following that, a questionnaire was designated using Google Doc software and was distributed randomly via different social networks. In total, 462 individuals completed the questionnaire online. Data provided by 403 individuals were considered valid, and data analysis was performed using SPSS V.19 and advanced statistical tools, such as factor analysis, correlation coefficients and Cronbach's alpha.

Results: Eventually, 18 elements were extracted and classified into four attitude dimensions, including "health as a balance of strengths", "treatment as a self-medicating process", "comparison with common medicine" and "potential disadvantages of

complementary medicine". These dimensions could be briefly referred to as "balance, self-medication, comparison and disadvantages". Furthermore, the relationship between attitude and behavior was assessed as an additional dimension, emphasizing the fact that in order to increase the frequency of referrals for complementary medicine, these dimensions need to be established as individual and multimedia messaging.

Conclusion: Overrated focus on the disadvantages of common medicine could have reverse outcomes.

Keywords: Attitude measurement device, Balance of strengths, Complementary medicine, Self-medication

HN10105530429

Evaluation of the effects of progressive muscle relaxation technique on breastfeeding self-efficacy in mothers of preterm infants

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Objectives: Breast milk is a divine gift designed to meet the infants' needs. Since mothers are sensitive to their newborns' health, they have an inclination towards breastfeeding. Breastfeeding self-efficacy is an adjustable skill, which can be improved by training programs, designed to increase the duration and frequency of breastfeeding. The purpose of the present study was to evaluate the effects of a progressive muscle relaxation technique on breastfeeding self-efficacy in mothers of preterm infants.

Materials and Methods: In this clinical trial, a total of 60 mothers with preterm infants were randomly assigned to intervention and control groups within two months. Mothers in the intervention group received progressive muscle relaxation training at 24-72 hours following delivery by the researcher (30-45 min), using the Jacobson method. Dennis breastfeeding self-efficacy scale was completed at baseline, the end

of the fourth week and the eighth week after the intervention by the mothers. Data were analyzed using SPSS.

Results: No significant difference was observed between the intervention and control groups in terms of demographic variables ($p>0.05$). Independent t-test results at the beginning of the study showed no significant difference between the two groups in terms of the mean score of breastfeeding self-efficacy ($p=0.45$). However, four ($p=0.001$) and eight weeks after the intervention ($p<0.001$), the mean scores of breastfeeding self-efficacy were higher in the intervention group, compared to the control group ($p<0.001$) and the difference was statistically significant. Also, ANOVA test showed that the mean score of breastfeeding self-efficacy in the intervention group was significantly different at various time intervals ($p<0.001$).

Conclusions: Considering the effects of relaxation training on breastfeeding self-efficacy of mothers with preterm infants, training on these techniques is an effective and low-cost strategy to improve the health of mothers, particularly mothers of preterm infants. Progressive muscle relaxation technique has positive effects on promoting breastfeeding self-efficacy in mothers of preterm infants and can be considered as an effective strategy to improve nursing care and provide better care services for these mothers.

Keywords: Breastfeeding self-efficacy, Postpartum period, Preterm infant, Relaxation

HN10108540980

The efficacy of burdock herbal tea and cherry stems for dissolving and preventing the formation of calcium oxalate

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Objectives: Most kidney stones are composed of calcium oxalate (CaC_2O_4), or a mixture of CaC_2O_4 and calcium phosphate. In the present study the efficacy of the burdock herb and cherry stems for dissolving and preventing the formation of CaC_2O_4 were evaluated.

Materials and Methods: The electrical conductivities of the control solution and herbal tea solutions were recorded using a conductivity meter during titration with NaC_2O_4 , and directed graph in terms of added NaC_2O_4 was plotted. The calcium release rates of CaC_2O_4 saturated solutions, and solutions containing herbal teas and saturated CaC_2O_4 were measured using a flame photometer.

Results: The equivalence point of herbal teas' directed graphs compared to the control was moved to lower volumes, and release of the herbal teas was more than the saturated solution.

Conclusion: Based on the conductivity metering results, the active compounds of herbs lead to reduction in calcium density, and are effective in preventing kidney stones, with cherry stems being more effective. The release results showed increased calcium concentration and stone dissolution and superior effects of burdock. Both herbs have medicinal and preventive properties, cherry stems are better for prevention while burdock has more therapeutic effects.

Keywords: Calcium Oxalate, Conductivity metering, Prevention, Treatment

HN10104930351

The interaction between rosemary as an anti-cancer medicinal herb and ctDNA

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Objectives: Rosmarinus officinalis (rosemary)

has shown various biological features such as anti-cancer properties. Some anti-cancer synthetic and natural drugs such as cisplatin and saffron carotenoids interact with DNA macromolecule and function through affecting transcription and replication processes. The purpose of this study was to evaluate the interaction between the aqueous extracts of rosemary and ctDNA as one of the possible mechanisms behind the anti-cancer function of this plant.

Materials and Methods: Optical spectroscopy, fluorescence and circular dichroism were used to study the interaction between various densities of rosemary aqueous extracts (0-5 mg/ml) and ctDNA macromolecule (0.03 mg/ml) in tris buffer (pH=7.4) at laboratory temperature.

Results: The results of optical spectroscopy showed that ctDNA absorption (260 nm) increased with the elevated concentration of rosemary aqueous extracts (hyperchromism). This can be an indicator of conformational and structural changes of ctDNA due to interactions with the extracts. In addition, the aqueous extracts of rosemary led to fluorescence quenching of DNA-ethidium bromide complex. Based on the Stern-Volmer equation, its rate constant was 0.39 mg/ml⁻¹. Circular dichroism spectrum showed that the aqueous extract of rosemary interacted with CtDNA through non-intercalative binding and induced conformational changes (B to C transition) in ctDNA structure.

Conclusion: The results showed that the aqueous extracts of rosemary were in interaction with ctDNA. It is possible that some conformational changes be induced in DNA by binding of the extracts to a small fragment of DNA.

Keywords: ctDNA, Interaction, Rosemary, Spectroscopy

HN10101870067

Utilization of complementary medicine in women consulting health care centers of gonabad and its relationship with anthropometric indices in 1394

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Objectives: Complementary medicine refers to

a group of diagnostic and therapeutic methods used in treating diseases; the usage rate of these therapeutic methods is increasing. Therefore, this study was performed to evaluate the usage rate of complementary medicine and its relationship with demographic and anthropometric indices in women.

Materials and Methods: This cross-sectional study was performed on 303 women consulting health centers of Gonabad in 1394, who were selected using quota sampling. Data was collected using a researcher designed questionnaire and was analyzed using SPSS (ver. 20) and with the help of descriptive statistical and analytical methods.

Results: The mean age of participants was 31.9 years. In this study, 92.7% of the participants were married, and 74.4% had academic education. 65.7% were housewives, and 16.5% were government employees. 46.6% had normal body mass index, 46.7% were overweight and obese, and 46.5% had abdominal obesity. In this study, 63% of women had used complementary medicine methods; the usage rate of each of these methods in order of importance is as follows: herbal medicine (44.5%), dietary supplements (24%), bloodletting (17%), dieting and exercise therapy (10%), and acupuncture (1%). In this study, there was no significant relationship between anthropometric indices (p=0.667) and abdominal obesity (p=0.495), using complementary medicine methods.

Conclusion: Considering the usage rate of complementary medicine methods, especially herbal medicine by the public, it is essential and inevitable to perform integrated research on the efficacy and efficiency of these methods, determine the status of these methods in patient care and to train academically.

Keywords: Complementary medicine, Function, Body Mass Index

HN10108380899

The effect of hydro-alcoholic extract of Nigella sativa on some serum parameters of cisplatin-induced nephrotoxicity in rats

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Objectives: Cisplatin is one of the most important anti-cancer drugs. Nigella sativa is an herb with lots of pharmacological properties. The purpose of this study is to evaluate the effects of Nigella sativa on some serum parameters of cisplatin-induced nephrotoxicity.

Materials and Methods: In the present study, we investigated the effect of prescribing Nigella sativa extract (100,200 mg/kg) and Vitamin E (100 mg/kg) on changes in urea, creatinine, albumin, sodium, potassium and osmolality serums in rats treated with cisplatin (6mg/kg).

Results: Serum concentrations of creatinine, urea and osmolality had a significant increase in the cisplatin group. Moreover, albumin concentration was significantly reduced in this group as compared to the control group.

Creatinine concentration of the serum of the prevention-treatment groups, and urea and creatinine concentration in the serum of the prevention and prevention-treatment of vitamin E groups were significantly increased as compared to the cisplatin group. But the Albumin serum concentration of the other groups on the 12th day did not have a significant difference as compared to the cisplatin group.

The sodium concentration of the serum of the prevention-treatment group of Vitamin E showed a significant increase as compared to the cisplatin group, but sodium concentration of the serum of cisplatin group was not significantly different from the other groups. Serum potassium concentration of the other groups on the 12th day had no significant differences with the cisplatin group. Serum osmolality of vitamin E prevention group, and the prevention and prevention-treatment groups of 200 mg/kg Nigella Sativa showed a significant decrease as compared to the cisplatin group. Also, serum osmolality of the prevention and prevention-treatment 100mg/kg Nigella sativa groups showed a significant

decrease as compared to the cisplatin group.

Conclusion: The results of this study showed that using vitamin E and Nigella sativa extract have profitable effects on cisplatin-induced nephrotoxicity. Further studies are required on the mechanism of extract effects on renal cisplatin.

Keywords: Cisplatin, Nephrotoxicity, Nigella Sativa

HN10101410479

An in-vitro study of solubility effects of fig on clots

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Objectives: In the traditional systems, different parts of fig (*Ficus carica* L) have been used as the solver of meat (Proteolytic). In this study, we aim to use different concentrations fig extract to investigate its clot-resolving property. Although several studies have been conducted on fig extract properties, none of them have investigated its effect on haemolysis (RBC Lazer).

Materials and Methods: Whole blood was taken from healthy individuals (5 Persons) and clotted into sterile microtubes with a stated weight. The serum was poured out and the clot was weighted. After resolving the clot with five different herbal extract saturations (1.25% to 20%), the upper liquid was taken out and the remaining was weighted once again with microtubes. The percentage of clot resolving was measured based on the weight difference of microtube before

and after resolving. In addition, the upper liquid was used for hemolysis evaluations by means of two methods: potassium measurement and observation by microscope

Results: A significant percentage of clot was resolved as a result of using the fig extract (around 13.5%), while with normal saline (negative control), the minimum insolubilization was observed (1-2%). Moreover, there was no hemolysis in any saturation.

Conclusion: It seem necessary to conduct further studies using other doses to achieve better results.

Keywords: Ficuscarica, Hemolysis, Herbal extract, Solving clots

HN10107540712

The anticonvulsant effect of aqueous and ethanolic extracts of *Lippia citriodora* aerial parts and its main constituent verbascoside in mice

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Objectives: In the present study, the effects of *Lippia citriodora* and its active ingredients, verbascoside, on seizures induced by pentylenetetrazol (PTZ) and maximal electroshock models were evaluated.

Materials and Methods: Aqueous and ethanolic extracts (200, 400 and 600 mg/kg) of *Lippia citriodora*, as well as verbascoside (100, 200 and 400 mg/kg) were applied in mice. Normal saline (10 ml/kg) as the negative control and diazepam (2 mg/kg) as the positive control were also used. In PTZ test, latency to first minimal clonic seizure, latency to first generalized tonic clonic seizures (GTCS), total duration of seizures and protection against mortality were evaluated. In electro-shock test, stretching length

of extremities and protection against mortality were recorded.

Results: In PTZ model, aqueous extract (600 mg/kg) increased GTCS latencies. Three doses of aqueous extract decreased the total duration of seizure. Ethanolic (400 and 600 mg/kg) increased GTCS latencies. Moreover, three doses of ethanolic extracts decreased total duration of seizures. Three doses of verbascoside decreased total duration of seizure. These agents did not show any protective effects on seizure induced by MES model. In PTZ model, flumazenil, did not inhibit the prolongation of seizure latency induced by these agents, 7- nitro-indazole on the other hand, inhibited the prolongation of seizure latency.

Conclusion: Results of this study demonstrated that aqueous and ethanolic extracts of *Lippia citriodora* leaves could have anticonvulsant activity in the PTZ model and this effect may be mediated, at least partly, through interaction with nitric oxide.

Keywords: Anticonvulsant effect, Flumazenil, *Lippia citriodora*, Verbascoside, 7-nitroindazol

HN10104260275

Assessment of educational challenges and barriers against the application of complementary medicine in health systems

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Objectives: Complementary medicine in Iran is a comprehensive school, with its specific diagnostic and therapeutic models. Complementary medicine, similar to other schools, looks at health and diseases from its own unique perspective and applies special tools for patient treatment and health promotion. In this study, the level of knowledge and educational barriers against the application of complementary medicine were evaluated among the personnel at Hasheminejad Hospital, Mashhad, Iran.

Materials and Methods: This study was carried out by reviewing various articles and conducting interviews with the medical personnel (from

different age groups) with different work experiences to evaluate their level of knowledge and educational barriers.

Results: The following factors were derived and evaluated: 1) individual barriers of the personnel (e.g., lack of skills and time, work overload, lack of training courses on complementary medicine, low income and inadequate perks); 2) individual barriers of patients (e.g., variations in the knowledge level of patients, educational level, willingness to use complementary medicine and high patient admission); 3) environmental obstacles (e.g., lack of sufficient space); 4) administrative barriers (e.g., physicians' rejection of complementary and traditional medicine, inadequate financial support and absence of specialists for the implementation of complementary medicine at hospitals).

Conclusion: Since the best type of treatment is one that facilitates full, consistent recovery of patients in the shortest amount of time with the lowest costs, complementary medicine can play a major role in health systems. The need for the use of complementary medicine in health systems necessitates academic education, in-service training courses and raising awareness in order to promote the use of complementary medicine alongside classic medicine by employing specialists and comprehensive programs.

Keywords: Complementary medicine, Challenges, Educational barriers

HN10103190739

Lead encephalopathy associated with traditional medicines

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Objectives: Traditional medicine is widely used in developing countries and is considered as a progressive method in the western world.

Nevertheless, scientific research on the safety and efficacy of this method is inadequate. According to several reports, documented mortalities and severe illnesses due to lead poisoning could be associated with the use of traditional medicine. This study aimed to determine the potential effects of traditional medicine on lead encephalopathy.

Materials and Methods: This systematic literature review focused on the identification of case reports and case series in databases such as Google Scholar, MEDLINE, CINAHL, EMBASE and Cochrane Library from 1990 to July 2015. In addition, reference lists and author information of identified articles were explored. Inclusion criteria were case studies of human lead encephalopathy associated with the practice of traditional medicine. There were no restrictions regarding the language of published articles, and data were subsequently extracted in the form of narrative summary.

Results: In total, we found 61 cases of lead encephalopathy potentially associated with traditional medicine, the majority of which encompassed infants and children (95%). Cases of lead encephalopathy were associated with the traditional medicine of Indian subcontinent, China, Middle East and Latin America. Among the identified lead poisoning cases, 11% were fatal, and others caused residual neurological deficits. In addition, there were 4 cases (7%) of lead poisoning associated with the use of Ayurvedic medicine, 50 cases (82%) associated with Middle Eastern traditional practices, and 3 cases (6%) associated with the use of other traditional medicines. The fact that children were affected more frequently and more severely than adults is not surprising given the higher susceptibility of these individuals to lead, as well as their lower threshold for the development of encephalopathy.

Conclusion: The findings of the present study have several implications for clinicians and public health officials. For instance, clinicians responsible for the assessment and treatment of patients with encephalopathy should consider the association between lead poisoning and use of traditional medicine in the differential diagnosis. Furthermore, users of traditional medicine should be screened for lead exposure and strongly encouraged to discontinue metal-containing drugs. As the human society becomes globalized, it is imperative for pharmacists and

health care providers to expand their knowledge about the safety of traditional practices.

Keywords: Lead encephalopathy, Traditional medicine, Herbal medicines, Folk medicine

HN10103110146

The effects of aurantium scent on sleep quality in patients undergoing hemodialysis in select hospitals affiliated to Mashhad university of medical sciences in 2014

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Objectives: The efficacy of citrus aurantium in decreasing anxiety is comparable to diazepam, therefore it can be used as a diazepam alternative. Aroma therapy causes the release of endorphin in the brain and feeling of wellbeing in the patient. Aurantium is a soothing plant which improves sleep quality. This study was designed with the purpose of evaluating the effects of the aurantium scent on sleep quality in patients undergoing hemodialysis.

Materials and Methods: This study was a randomized controlled clinical trial. The research population (available) of this study was the entire hemodialysis patients hospitalized in Montaserie hospital, affiliated to Imam Reza medical center. The Pittsburgh Sleep Quality Index (PSQI) questionnaire, which evaluates the quality of sleep was used to gather data; it is the best tool for measuring the quality of sleep in patients. In order to analyze data, we used the SPSS software (ver. 16).

Results: The results of paired t-test, and the

significance level of the test results for aurantium extract in the control group for all dimensions was less than 0.05, which shows significant mean differences between the effects of each dimension before and after using aurantium. For the control group the significance level of 0.05 was achieved only for the dimensions of delay in sleep and adverse functions during the day; there was no significant mean difference in other dimensions.

Conclusion: Evaluating the effects of aroma therapy with aurantium essence on the quality of sleep in patients in this study showed that aurantium essence leads to a reduction in mental sleep quality, delay in falling sleep, sleep disorders, using sleeping pills, poor functioning during the day, sleep prolongation, and poor sleep quality in the intervention group, which shows mean decrease and increase in the use of aurantium extract is significant.

Keywords: Aroma therapy, Hemodialysis patients, Aurantium extract, Quality of sleep

HN10104500372

Evaluation of the antiplasmodial activity of ethnopharmacological plants used for the treatment of malaria in Iran

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Based on the findings of several ethnopharmacological studies, three medicinal plants including *Myrtus communis*, *Otostegia persica* and *Otostegia michauxii* were selected for evaluation of the mode of action according to the inhibition test of heme detoxification (ITHD). Obtained results were calculated and presented as percentage of heme detoxification inhibition of *M. communis* (100%), *O. persica* (7%) and *O. michauxii* (25%). Moreover, *M. communis* was found to have significant inhibitory effects

on heme detoxification. In this study, mode of action for antimalarial activity of *M. communis* was also identified, and the results provided validation for the ethnic usage of *M. communis* against malaria.

Keywords: Ethnopharmacology, Malaria, Medicinal plants

HN10100320004

The effect of hand and foot massage on pain and anxiety

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Objectives: Pain and anxiety are the most common complications after cesarean section. To confront these problems, drug interventions are typically used; however, the effects of these drugs and lack of access to these drugs has led to using non-drug interventions such as massage therapy. This study aims to determine the effects of hand and foot massage on pain intensity and anxiety of women after cesarean section.

Materials and Methods: This blind clinical trial was performed in governmental hospitals of Mashhad, Iran. A total of 80 pregnant women, referring to delivery ward for elective cesarean and having the inclusion criteria for study, were selected. The participants were chosen through convenience sampling then, they were randomly assigned to two groups. The visual analog scale was used to determine the pain and anxiety intensity. Each of the feet and hands were massaged for five minutes. In case pain is not

controlled and the patients requested for pain relief, we used the routine analgesics to relieve pain. In the control group, if the patient requested for relieving pain, only the routine analgesics were administered. Then, the intensity of pain and anxiety before and immediately, 60 and 90 minutes after the intervention were evaluated. The statistical analyses were performed using Mann-Whitney and independent t-test.

Results: The findings of this study showed that there was no significant difference between the two groups regarding pain and anxiety intensity before the massage ($p>0.05$). However, immediately, 60 and 90 minutes after the intervention there were significant differences between the two groups concerning pain and anxiety intensity ($p<0.001$). These differences indicate lowered pain and anxiety intensity in the intervention group.

Conclusion: According to our findings, hand and foot massage was associated with the reduction of pain intensity and it can be used as a complementary method to reduce pain and anxiety.

Keywords: Anxiety, Caesarean, Foot and hand massage, Pain

HN10100900443

A study of knowledge and attitudes of nursing students of Shirvan University on herbal treatment

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Objectives: Traditional medicine is mostly based on the use of medicinal plants. In fact, herbal treatment is one of the sub-branches of complementary medicine. Today, people are more inclined using medicinal plants due to high costs and dissatisfaction from the complications

of chemical drugs. According to the studies conducted in the Iran and other countries, the medical students do not have enough information on traditional medicine and cannot guide the patients regarding this issue. Given the increasing prevalence of herbal treatment and in some cases, its incorrect use, paramedical students should have sufficient knowledge on traditional medicine in order to answer the patients' enquiries. This study aimed to evaluate the knowledge and attitudes of nursing students on herbal therapy.

Materials and Methods: This cross-sectional study was performed on nursing students in Shirvan, Iran, 2015. According to previous studies, the sample size with 80% power and 95% confidence interval (at the 0.05 level of significance) was calculated to be 110 people. Research ethics principles were considered in all the phases of the study. Informed consent was obtained from all subjects and their information was kept confidential. Data were gathered through a self-designed questionnaire including two part; the first part contained demographic information and the second part comprised of questions assessing the knowledge and attitudes of the students. The latest scientific resources including books, publications and scientific papers were studied. The validity of the questionnaire was confirmed by several faculty members and the traditional medicine experts. Test-retest reliability was confirmed with an interval of 14 days ($r=0.85$). The collected data were analyzed by SPSS version 19, performing descriptive and analytical statistics.

Results: After performing the statistical analysis, we found that the mean age of the students was 20.84 ± 1.6 years and about 53.5% of the subjects (54 cases) were female. The majority of parents of students had the basic education (41.6% of fathers and 47.2 of mothers). About 92.1% of the subjects believed that training on herbal medicine is useful and 75.2% of them had experienced treatment with herbal medicine. Regarding treatment priority, the combination of modern medicine and herbal therapy was suggested by 20.8% of the subjects. Approximately 32.6 and 44.6% of the subjects believed that the efficacy of herbal therapy is high and moderate, respectively. Also, 41.6% of the subjects were encouraged to use herbal medicine by friends and family, and 27.7% had personal experience of herbal medicine. Moreover, 18.8 and 11.9% were encouraged to use

herbal medicines by teachers, books and media. In 44.6% of the subjects, books were introduced as a source of education on herbal medicine. About 70.7% of the students believed that there is no opportunity for learning about herbal medicine. In addition, 56.4 and 40.6% of the students asserted that their knowledge on herbal medicine is low and moderate. About 81.2% of the participants said they were unaware of the complications of medicinal plants and 83.2% believed that the use of medicinal plants should be under medical supervision. Finally, 95% of the participants believed that training the students can have a positive impact to guide the patients.

Conclusion: Improving knowledge on medicinal plants was proposed as a way of providing guidance and advice for patients. About 95% of the participants asserted that upgrading students' knowledge on herbal therapy can have a positive impact on the patients. Providing facilities for education and research in this field can make a significant contribution with upgrading students' knowledge and helping patients.

Keywords: Attitude, Awareness, Medicinal plants

HN10106220510

Complementary and alternative medicine and its application in the viewpoint of health personnel in Gonabad

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Objectives: There are different perspectives

towards the use of complementary and alternative medicine. This study aimed to evaluate the perspective of health personnel about complementary and alternative medicine in Gonabad, Iran.

Materials and Methods: This cross-sectional analytical study was conducted on the health personnel of Gonabad in 2014 using attitude measurement inventory about the use of complementary and alternative medicine.

Results: In this study, 50 medicine could exploit complementary and alternative medicine more efficiently, while 52% believed that complementary treatments with unknown mechanisms should not be used for patients at 5 all. Also, 94% noted that praying could be effective in increasing the quality of life, and 94% stated that patients who are active in self-care programs experience better treatment outcomes. On the other hand, 75% of the respondents believed that a disease could be regarded as an opportunity for excellence, and 70% believed that complementary and alternative medicine would lead to fewer complications compared to conventional treatment methods. Among the most popular methods used by the respondents were praying (68%), medicinal herbs (48%), exercise (48%), dietary treatments and use of vitamin supplements (42%), aqua therapy (23%), bloodletting (20%), massage therapy (17%), acupuncture (6%) and yoga (5%). None of the respondents had history of magnetic therapy.

Conclusion: According to the results of this study, it seems that complementary and alternative medicine could be used by medical personnel in the treatment of various diseases for several reasons, including limited side effects.

Keywords: Complementary medicine, Alternative medicine, Perspective, Health personnel

HN10104450480

Ethnobotanical and pharmacological effects of *Citrus medica* L.: from Iranian traditional medicine to modern phytotherapy

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Objectives: Medicinal plants have long been used in the Iranian traditional medicine (ITM) for the treatment of different diseases. Several herbal remedies have been prescribed by Iranian scholars for various complications. Among numerous species used in ITM, *Citrus medica* L., which belongs to the family of Rutaceae, has been widely used in the traditional medicine due to its edibility and broad-spectrum therapeutic applications. This study aimed to review the botanical description, ethnopharmacological uses, and pharmacological and phytochemical properties of *C. medica*.

Materials and Methods: In this study, ethnomedicine data of different parts of *C. medica* were extracted from reliable sources of ITM. In addition, published scientific reports about the composition and pharmacological properties of this herbal medicine were collected via literature search in databases such as Google Scholar, PubMed, ScienceDirect, Scopus and SID during 1970-2015. In this article, all the therapeutic aspects of *C. medica* in ITM references were reviewed and compared with the findings of modern phytotherapy.

Results: *C. medica* L. is the first citrus tree to be introduced in the Mediterranean basin. Several studies have confirmed the presence of various compounds including flavonoids, essential oils, vitamin C, citric acid, glucose, alkaloids and carbohydrate in different parts of *C. medica*. In ITM, this plant is known as a purgative, anti-inflammatory, analgesic, stomach tonic, visceral stimulant and antidote agent. Modern phytotherapy confirms some of these properties.

Conclusion: According to the results of this study, all parts of *C. medica* have potential therapeutic properties, and further research is required as to explore the clinical and toxicological aspects of this medicinal plant.

Keywords: *Citrus medica*, Iranian traditional medicine, Phytomedicine, Phytotherapy, Review

HN10101780057

Effectiveness of yoga as a treatment for addiction

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Objectives: Addiction is designated to a process whereby a behavior, that can function both to produce pleasure and to provide escape from internal discomfort, is employed in a pattern characterized by 1) recurrent failure to control the behavior (powerlessness) and 2) continuation of a behavior despite its significant negative consequences (unmanageability). Addiction is a debilitating psychiatric disorder and its estimated economic costs in the US society are US\$524 billion per year. We have always attempted to find an effective treatment for addiction. This article aims to critically evaluate the evidence of effectiveness of yoga for treatment of addiction.

Materials and Methods: A literature review (from MEDLINE, 2000-2015) was performed using appropriate keywords to search articles investigating the effect of yoga on treatment of addiction.

Results: Yoga has been defined as a part of Ayurvedic medicine consisting of one or more of the following: specific postures, breathing exercises, body cleansing, mindful meditation and lifestyle modifications. Yoga can manage various psychiatric conditions, including anxiety, depression, eating disorders, schizophrenia and sleeping disorders. The mechanisms of action for yoga's effect in addiction may be attributed to reductions in anxiety, depression, stress, impulsive, addictive behaviors and psychosis. Yoga may also promote personal development through increasing emotional stability, life-satisfaction and self-awareness, as well as improving mental, physical and social health; or strengthening initiative, motivation and confidence to improve maturation, intentions, attitudes and behaviors necessary to overcome addiction.

Conclusion: The evidence support the effectiveness of yoga for treating addiction, but further studies are

required to determine the benefits of yoga.

Keywords: Addiction, Drug abuse, Yoga

HN10100600033

Effects of aromatherapy on fatigue and quality of life in patients undergoing hemodialysis

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Objectives: Fatigue is a common disabling condition, which affects maintenance dialysis patients. Fatigue increases individual dependence and reduces quality of life. This study aimed to determine the effects of aromatherapy with lavender and sweet orange essence on the fatigue and quality of life in patients undergoing hemodialysis.

Materials and Methods: This clinical trial was conducted on 64 patients undergoing hemodialysis at hospitals affiliated to Tehran University of Medical Sciences, Iran. Subjects were randomly divided into two groups of intervention and control. In intervention group, two drops of lavender essence with fresh orange was poured on a 2×2 piece of gauze by a dropper and pinned to the patients' collar. Subjects were asked to breathe normally for 15-20 minutes. Intervention was performed three times per week for eight weeks. Data were collected using demographic questionnaires, Rhoten Fatigue Scale, and Kidney Disease Quality of Life Short Form (KDQOL-SF™1.3). Data analysis was performed using descriptive statistics in SPSS V.18.

Results: In this study, there was a significant difference between the severity of fatigue before and after the intervention, as well as a two-month follow-up ($p \leq 0.05$). In addition, changes in the results of quality of life questionnaire were indicative of a significant difference between the quality of life of patients before and after the intervention, as well as the two-month follow-up ($p < 0.001$, $p \leq 0.05$)

Conclusion: According to the results of this study, aromatherapy with lavender and sweet orange essence could be a cost-efficient, non-

invasive alternative method for the treatment of patients undergoing hemodialysis.

Keywords: Hemodialysis patients, Fatigue, Quality of life, Aromatherapy

HN10101870067

Avicenna's al-Adwiyat al-Qalbiyah (a treatise on cardiovascular medications): a phytopharmacological review on its cardioactive medicinal plants

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Objectives: Avicenna (*IbneSina*) the well-known and influential Iranian scholar of Islamic Golden Age, lived between 98 and 1037 AD. He was an accomplished scientist, especially in the fields of medicine and philosophy. *Al-Adwiyat al-Qalbiyah* (a treatise on cardiovascular medications) is one of his important medical books on simple and compound medicines, traditionally used in the treatment of cardiovascular diseases. In this study we review phytopharmacological aspects of Avicenna's recommended cardioactive plants in the book *Al-Adwiyat al-Qalbiyah*.

Materials and Methods: The book *Al-Adwiyat al-Qalbiyah* was investigated to obtain cardioprotective medicinal plants and their humoral mechanisms of actions. In addition, an extensive search for modern phytopharmacological studies on most popular bibliographic databases (Web of Science, Pubmed, Science direct, Scopus, etc.) was performed to compare the traditional usage of Avicenna's suggested plants with the modern pharmacological data.

Results: Some of the cardiovascular diseases mentioned in the book "Al-Adwiyat al-Qalbiyah" are: difficulty in breathing or *tawahhush*, palpitation of the heart or *kafaqan*, syncope or *ghashi* and heart weakness or *za'af al-Qalb*. A total of 67 simple drugs with herbal, mineral and animal sources have been mentioned as separate monographs. *Anchusa*

italic Retz. *Cinnamomum Camphora* (L.) J.Presl, *Citrus medica* L., *Crocus sativus* L., *Elettaria Cardamomum* (L.) Maton, *Lavandula Stoechas* L., *Melissa officinalis* L., *Punica Granatum* L. and *Rosa × damascena* Mill are among the most important cardioactive plants mentioned in this book. In-vitro and in-vivo pharmacological studies have confirmed cardioprotective mechanisms of the most plants mentioned in this book, including antioxidant, hypocholesterolaemic, anti-atherosclerotic, hypotensive and anti-arrhythmic activities, as well as positive inotropic, chronotropic and anti-inflammatory effects, and prevention of myocardial ischemia.

Conclusion: Considering the comprehensive knowledge in the field of traditional Iranian medicine, scrutinizing its recommendations can pave the way to developing new approaches to medicine and therapeutic methods.

Keywords: Al-Adwiyat al-Qalbiyah, Cardioactive plants, Phytopharmacological studies

HN10101770056

The attitudes and practices of mothers referring to health care centers regarding medicinal herb usage in pediatrics diseases in Iran

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Objectives: Due to the advantages of medicinal plants growing in the world, this study aims to investigate the attitudes and practices of mothers referring to health care centers in Bushehr, regarding the medicinal plants to treat their children's diseases.

Materials and Methods: In This descriptive-analytical study, 384 mothers referring to health centers were selected through randomized sampling. A questionnaire was prepared, and its

validity and reliability were assessed. The data were analyzed performing chi-squared, Mann-Whitney and Kruskal-Wallis analytical tests, using SPSS, version 18.

Results: The results showed that the majority (76%) of the participants did not have the desired attitude towards using herbal medicine for their children. Attitude has a positive and meaningful relation with their practice. A positive and significant statistical relationship was observed between mothers' practice and their level of education.

Conclusion: According to our results, it is necessary to provide a plan for improving mothers' knowledge and attitude regarding medicinal plants in pediatric diseases.

Keywords: Attitude, Children, Medicinal plants, Mothers, Practice

HN10100940382

Widely-used medicinal plants by diabetic patients at a diabetes clinic in Mashhad, Iran

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Objectives: Diabetes mellitus is a metabolic disorder, which causes the body to become insulin resistant or lose its ability to produce insulin. Two major types of diabetes include type I diabetes, in which the destruction of pancreatic beta cells leads to impaired insulin production, and type II diabetes, where insulin resistance is progressive. Genetic factors, obesity and physical inactivity play major roles in the development of type II diabetes. In the long run, the side-effects can influence different body organs such as the kidneys, heart, blood vessels, eyes and nerves.

Materials and Methods: This study was conducted through completing a series of questionnaires on anti-diabetes regimens and consumption of herbal medicines in type II diabetic patients, attending a diabetes clinic

in Mashhad, Iran. This study was conducted via history taking and questionnaires on 400 patients following therapeutic regimens and consuming medicinal herbs.

Results: Overall, 72% and 28% of participants were female and male, respectively. The majority of patients were within the age range of 40-70 years, accounting for 75% of the participants. Overall, 68% of the participants used a combination of anti-diabetes regimens and herbal medicines. According to the results, 45% of the subjects had referred to apothecary shops, while others had used medicinal plants without prescriptions, based on recommendations by friends or media. The medicinal plants listed in the questionnaire were as follows: *Urtica dioica* (essence, boiled & powder) (67%); fenugreek seeds (essence, boiled & powder) (53%); Feltly germander (essence, boiled & powder) (30%); *Eryngium* (essence) (25%); *colocynth* (boiled) (15%); *Plantago psyllium* (essence, boiled & powder) (60%); cranberries (essence & boiled) (32%); cinnamon (essence, boiled & powder) (100%); and *Securigera securidaca* (powder) (15%).

Conclusion: Use of medicinal plants by diabetic patients is not recommended under any circumstances without medical consult. These medicinal herbs should not replace diabetes medications or insulin in patients with diabetes since these plants alone have little effects on blood glucose. The effects of these plants vary from one person to another and may interfere with other drugs consumed by patients. Therefore, it is essential to inform the community about traditional treatment methods.

Keywords: Diabetes, Herbal medicine, Traditional medicine, Treatment methods

HN10107330668

The effect of Salep root extract on concentration of GnRH, progesterone and LH hormone in female rats

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Objectives: Using Salep as an energetic drug

and sexual stamina enhancer is commonly used in traditional medicine. This study aims to investigate the effect of aqueous extract of Salep on serum levels of progesterone and LH hormones in the female rats.

Materials and Methods: In this experimental study, 40 adult female Wistar rats were selected and randomly divided into five groups of control (receiving no drugs), sham (receiving 1 ml of distilled water), experimental group 1 (receiving 20 mg/kg of aqueous extract of Salep), experimental group 2 (receiving 40 mg/kg of aqueous extract of Salep) and experimental group 3 (receiving 80 mg/kg of aqueous extract of Salep). In the experimental groups the extract was injected intraperitoneally for 28 days. At the end of the experimentation, the mice were bled to examine the serum levels of the progesterone and LH hormones ($p < 0.05$).

Results: In the experimental group, injecting the aqueous extract of Salep caused a significant increase in the serum levels of GnRH, progesterone and LH hormones, as compared to the control group ($p < 0.05$).

Conclusion: The aqueous extract of Salep can play a positive role in female ovulation process through increasing the serum levels of GnRH, progesterone and LH hormones.

Keywords: GnRH, LH, Progesterone, Salep, Rats

HN10106170599

Prevention of diseases with contraption of seasons in traditional persian medicine

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Objectives: Each of the four seasons of the year like the human body has a certain temperament. Seasonal contraption is the most important issue in health maintenance in Persian medicine. In this article the necessary contraptions are presented to maintain health and prevent common diseases

in each season.

Materials and Methods: The topic of contraptions of seasons was studied using reliable health sources of traditional Persian medicine.

Results: Contraptions of spring include consumption of soft foods such as lamb, fried eggs, barberry syrup, rhubarb, and sekanjabin; body purgation with enema and bloodletting through phlebotomy; and avoiding excess activity, excess bathing, extreme anger and excitement.

Contraptions of summer include consumption of fresh fish, chicken, sour pomegranate juice, verjuice, rhubarb syrup, cherries, plums, watermelon, lettuce, spinach; increasing the amount of rest; avoiding excess movement, and excess intercourse.

Contraptions of autumn include consumption of spicy foods, lamb, melon, quince, apples and pears; bathing once every two days with lukewarm water and body purgation with enema. Contraptions of winter include consumption of foods such as lamb with spicy seasonings; excess movement and activity; avoiding phlebotomy and bloodletting.

Conclusion: According to Persian medicine resources health protection and disease treatment start with prevention. In this article, recommendations about lifestyle, especially eating habits and regulating sleep, wakefulness and physical activity in different seasons are given, which when followed will improve community health and save health care costs.

Keywords: Contraption, Season, Traditional Persian medicine

HN10100610956

Exploring women's experiences regarding traditional therapies in dealing with male infertility: a qualitative study

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Objectives: Infertility is one of the most important problems of couples. Almost 40% of infertilities are related to males. Given the importance of individual and social problems caused by infertility, we should find safe, easy, cheap and effective treatments for this problem. This study aimed to explore traditional therapy experiences of women whose husband was infertile.

Materials and Methods: This qualitative study was conducted performing content analysis. In total, 19 semi-structured interviews were carried out with women whose husband was infertile. Subjects were aged between 28-59 years and were selected through purposive sampling. The data were interpreted using content analysis.

Results: Generally, three themes were extracted from the data, i.e., formerly administered traditional treatments, facilitating the use of traditional medicine and barriers of traditional medicine use.

Conclusion: The majority of women believed in efficiency of traditional medical treatment of male infertility. Therefore, traditional medicine can be used as supplementary treatment along side with other male infertility treatments. Additionally, careful planning is required in order for proper use of traditional medicine and removing application barriers of this type of treatment.

Keywords: Female, Male Infertility, Qualitative Study, Traditional medicine

HN10103600442

Evaluation of the attitudes and awareness of physicians, dentists and pharmacists of Shirvan about herbal medicine

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Objectives: One of the important methods of disease treatment and relieving pain, which has been used for a long time, is complementary medicine. World Health Organization has defined complementary medicine as a collection of theoretical and practical sciences, which is used in diagnosing, preventing and treating mental or physical diseases or social disorders. This knowledge has been transferred from generation to generation orally or written. Nowadays, several reasons, such as the high costs of the modern medical services, the side effects of chemical drugs and patients' dissatisfaction with the modern methods, have led people to use traditional medicine. In Iran, it is often observed that patients eventually tend towards traditional medicine after trying modern medical treatment methods. This can be as a result of people's adherence to the old Iranian traditions and beliefs, or might be due to the observed achievements in the field of complementary medicine (5). In the recent years, the results of the previous studies indicated that these methods have been increasingly emphasized and used (6), and more than half of the studied people had acceptable knowledge of complementary medicine (7). Following the orders of the Supreme Leader emphasizing on reducing our dependence on the foreign countries, and considering the fact that the attitudes and awareness of the medical community in the field of traditional medicine towards the herbal products and drugs prescribed by them is very important, we conducted this study to evaluate the attitude and awareness of medical society of Shirvan in this field.

Materials and Methods: This cross-sectional study was done on a total of 72 doctors, dentists,

and pharmacists of Shirvan in the spring of 1394. A questionnaire including two parts was designed by the interviewers to collect data. The latest scientific resources such as books, magazines and scientific articles were evaluated for validity of the questionnaire. Ultimately, its content was confirmed by some faculty members and specialists. The reliability of the scale was approved with the test method during a 14-day period ($r=0.85$). The gathered data were analyzed performing descriptive and analytical tests using SPSS, version 19.

Results: The mean age of the subjects was 21.8 ± 41.14 , most of whom were men (70.8%), and 29.2% were women. Among all, 41.7% were general practitioners, 20.8% were pharmacists and 18.1% were dentists. During their practicing years, 77.8% of the samples had prescribed herbal medicines. Moreover, 44.4% of the participants preferred prescribing chemical drugs, and 9.7% of them preferred to prescribe herbal medicines. Regarding the herbal and chemical drugs' complications, 48.6% thought that chemical drugs have more complications, and 6.9% believed that herbal drugs have more side effects. Considering the amount of knowledge about herbal medicine, most percentage was related to the therapeutic effects of herbs (44.45%), and the least amount was related to herbal medicine interventions (1.4%). In addition, 44.4% of the samples thought that the desire of people to use herbal medicine and traditional medicine is because of their proper functionality, and 55.6% of the samples disagreed with that. Eventually, 88.9% of the participants believed that herbal and traditional medicine can have an effective role as a complementary medicine alongside with the modern medical science, while 11.1% did not have a good attitude towards the functionality and positive effects of this science. Also, there was a statistically significant difference between the job and prescribing herbal medicines ($p < 0.001$).

Conclusion: Since the knowledge and attitude of the medical groups concerning herbal medicine has a considerable impact on the manner and process of treatment, and also due the role of this knowledge in encouraging people to use herbal medicine in order to prevent diseases, we can increase the general knowledge to help patients and other members of the society.

Keywords: Awareness, Attitude, Physicians, Pharmacologists, Dentists, Traditional Medicine

HN10109061053

Determination of the concept of constipation in traditional and complementary medicine

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Objectives: Constipation is one of the most common digestive problems in modern life. More than one-seventh of the adult population complains about chronic constipation. However, no unified meaning of constipation has been provided.

Materials and Methods: In this study, major resources of traditional Iranian medicine, e.g., the Canon of Medicine by Avicenna, and Western medicine were used. For access to more recent articles, IranMedex, Scopus, SID and PubMed databases were searched, using the following keywords: "constipation" and "complementary and traditional medicine".

Results: Several factors cause or intensify constipation. In modern medicine, relatively precise and specific factors have been introduced for the definition of constipation and several methods have been proposed for its treatment. In traditional medicine, constipation is referred to as "Hasr", abdominal contraction or belly arrest. Also, constipation accompanied by pain is known as colic. The prevalence of constipation is lower in Asian countries. This condition accounts for 1% of annual physician visits and imposes enormous costs on healthcare systems. The definition of constipation in traditional Iranian medicine is different from modern medicine. In fact, in traditional medicine resources, diagnosis of constipation has been mentioned earlier and the normal frequency of bowel movements is higher, compared to what mentioned in modern medicine.

Conclusion: The precise outlook of traditional medicine and utilization of traditional treatment methods, along with the use of conventional

strategies, could benefit the treatment process.

Keywords: Constipation, Bowel movement, Traditional and complementary medicine

HN10101971051

The knowledge and attitude on wet cupping in traditional and complementary medicine

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Objective: Among different societies, application of complementary medicine is experiencing a growing trend. More specifically, wet cupping is one of the methods of complementary medicine which is common in different Asian countries such as China and Iran. In our society, despite the increasing interest in wet cupping, we have limited information regarding the side-effects and precautions associated with this treatment method.

Materials and Methods: The main sources of traditional medicine such as The Canon of Medicine by Avicenna and “Al-Iqraz al-Tebbieh” by Zayn al-Din Gorgani were used in this study. For retrieving recent articles and sources, we looked up IranMedex, Scopus and PubMed using the following keywords: cupping, hejamat/ hijamat and traditional medicine.

Results: Despite the growing interest in learning the basics of traditional medicine among academic population, especially medical students whose knowledge is limited regarding some traditional methods of treatment such as phlebotomy (blood sampling from specific vessels), cupping and leech therapy. The results showed that the doctors in Chaharmahal and Bakhtiari showed 16% and 18% knowledge and positive attitude for traditional medicine, respectively. Moreover, the patients referring to cupping centers in Tehran, were satisfied with the treatment results in more than 85% of the total referrals. Believing in religion and efficacy of the method were the main motivations for clients. The study conducted in Isfahan showed

that only 9.5% had experienced cupping during the previous 5 years.

Conclusion: Given the extensive and liberal use of traditional medicine, training the general public, as well as the qualified personnel for safe and effective application of traditional and complementary medicine services is of utmost importance.

Keywords: Knowledge and attitude, Traditional medicine, Wet cupping

HN10103530970

Use of clinical data extraction device from the wrist pulse based on the methods of traditional medicine

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Objectives: Pulse measurement is a classic method used for patient assessment and diagnosis in different countries, including Iran. In the Iranian traditional medicine, this evaluation was performed by placing four fingers on the forearm and measuring parameters such as the length, width and velocity of the pulse wave. To show the efficacy of this measurement in accurate disease diagnosis, a reproducible and quantitative method should be designated based on the findings of modern medicine. Advanced approaches in this regard could diminish human errors and establish standard criteria in disease diagnosis. Several references are available in the Indian and Chinese traditional medicine focusing on the scientific study of disease diagnosis, using the shaping and different parameters of the pulse. In Iran, there are reports on a number of devices designated to measure the pulse based on the level of pressure on the skin. However, these devices are mostly experimental, aiming to determine the shaping of the pulse, or change the shape by applying cuff pressure on the pulse.

Materials and Methods: In this study, we used a pulse measurement system developed based on the methods of Iranian traditional medicine,

which functions via a set of infrared optical sensors. These sensors are placed on specific spots of the forearm to simulate the fingers of a doctor measuring various parameters of the pulse. The sensors could help measure the length and width of the pulse, and a cuff is used to determine the velocity of the pulse, as well as the strength of the veins. Through this method, it is possible to estimate the forearm pulse at different pressures.

Results: In this new method, shaping of the pulse on each sensor are recorded at different cuff pressures and displayed on software. Afterwards, necessary parameters of the pulse are extracted from the software.

Conclusion: By this new method, we could extract the pulse shape and other parameters involved in disease diagnosis, while some of these parameters could be neglected in the traditional method due to the empirical nature of traditional medicine.

Keywords: Forearm pulse, Infrared optical sensor, Traditional medicine

HN10109191061

Effects of Swedish massage on some physiological and hematological indices in women with type II diabetes

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Objectives: Diabetes is one of the most common conditions, worldwide. This progressive and costly disease is considered a public health concern and can cause several complications. In recent years, application of complementary treatments such as massage therapy has increased in medical centers. In this study, type

II diabetic women were evaluated in order to evaluate the effects of Swedish massage on some physiological indices such as the mean blood pressure at rest and pulse rate, as well as some hematological indices including fasting blood glucose, serum insulin level, insulin resistance, serum cortisol and serum adrenaline.

Materials and Methods: In this quasi-experimental study, after the initial screening of patients with type II diabetes, introduced by the Diabetes Center of Neyshabur, 24 patients were randomly selected among 50 patients (age range: 45-55 years) and divided into two groups: test (n=12) and control (n=12) groups. The test group received 12 sessions of back and neck massage three times a week during one month (15 min each session). The studied variables were measured before and after the intervention.

Results: Data were analyzed using SPSS version 16. Changes in serum cortisol, adrenaline and pulse rate at rest in the test group were significantly different from the control group ($p \leq 0.05$). However, there was no significant difference in other factors.

Conclusion: The present study showed that 12 sessions of Swedish massage on women with type II diabetes can cause a significant decrease in serum cortisol and adrenaline levels, as well as pulse rate at rest. Changes in serum glucose, serum insulin, insulin resistance and mean blood pressure of the test group were not different from the control group. According to the intra-group changes, serum insulin, insulin resistance and mean blood pressure reduced after twelve sessions of Swedish massage in the test group. However, since these changes were insignificant, compared to the control group, we cannot definitely relate these changes to the effects of massage.

Keywords: Hematological indices, Physiological indices, Swedish massage, Type II diabetes

HN10103950299

The effects of massage therapy on the side-effects of bone marrow transplant: a review study

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Objectives: Patients receiving bone marrow transplant face some complications during preparation for this procedure. After the transplant, complications such as muscle pain, fatigue, nausea and mood swings have been reported. Management of these changes plays a major role in the success or rejection of transplant. One of the non-pharmaceutical methods for controlling these complications is massage therapy. Considering the contradictory reported results, we aimed to determine the effects of massage therapy on the complications of bone marrow transplant.

Materials and Methods: Data were gathered by searching through databases such as SID, Medscape, Medline, Proquest, Science Direct, Magiran, PubMed during 1990-2015, using the following keywords: "complications", "massage therapy", "bone marrow transplant" and their Farsi equivalents. Finally, 20 articles were retrieved.

Results: Massage therapy is effective in decreasing stress, muscle pain, nausea and vomiting, which are the results of treatment preparation for bone marrow transplant. Ales et al. (1999), while confirming the positive effects of massage therapy, introduced this technique to be advantageous for increasing the quality of life in patients. Smith et al. (2003) also stated that massage therapy can be effective for changing psychological and neurological side-effects of chemotherapy during bone marrow transplant and can comfort patients undergoing challenging medical procedures. Also, Bike et al. (2014) concluded that massage therapy after transplant was useful for restoring the production of blood cells from stem cells. On the other hand, McDonald (2004) suggested that doing massage therapy on the sole of the feet during apheresis could be relaxing for the patient.

Conclusion: Massage therapy is effective in decreasing complications of bone marrow transplant. However, since the details of massage therapy have not been clarified in previous studies, further research is highly recommended.

Keywords: Bone marrow transplant, Complication, Massage therapy

HN10104070244

Evaluation of the effects of auriculo-therapy on hormonal changes of 18 to 35 year-old single girls with polycystic ovary syndrome

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Objectives: Endocrine is one of the most common disorders all over the world. The cause of this disease is hormonal changes arising from polycystic ovary syndrome with the prevalence rate of 5-10%. The aim of this study is evaluating the effects of auriculotherapy on hormonal changes of single girls diagnosed with polycystic ovary syndrome.

Materials and Methods: This clinical trial was carried out on 60 single girls aged between 18 and 35. The participants were divided into two groups of auriculotherapy and medication with clinical, laboratory and ultrasound symptoms. The medication group was treated for three months, and the auriculotherapy group underwent treatment for two months. The results were analysed in three stages, using SPSS, version 15.

Results: During the two months, the unnatural amount of LH in the medication groups decreased by 13.4% and 6.7%, respectively. Three months following the intervention the groups had a decrease in the amount of LH, but this reduction was not significant ($p=0.9$) ($p=0.8$) ($p=0.8$). The relative frequency of the abnormal changes in TSH was not significant in any group before intervention ($p=0.3$). But the unnatural changes in FSH showed significant changes immediately and three months after the intervention in the auriculotherapy group ($p=0.02$); however, these changes did not diminish significantly in the medication group ($p=0.58$). Chi-square test showed that there was no significant difference in the relative frequency of the decrease in

unnatural changes of free testosterone in both groups before the intervention ($p=0.6$), after intervention ($p=0.2$) and three months after the end of the intervention ($p=0.5$). Friedman test in the auriculotherapy group did not show significant changes in the relative frequency of unnatural DHEAS at all those three times ($p=0.35$), while there was a significant difference in the medication group ($p=0.001$), which was in accordance with the increase of this hormone.

Conclusion: Auriculotherapy showed more decrease in the unnatural amount of DHEAS, LH and FSH hormones. Therefore it is suggested to replace drug therapy to cure polycystic ovary syndrome.

Keywords: Auriculotherapy, DHEAS, Follicle stimulating hormone, Free testosterone, Iran, Luteinizing hormone, Polycystic ovarian syndrome

HN10107380783

A review of effective herbal medicines in the treatment of prostate cancer

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Objectives: Uncontrollable growth of body cells can lead to cancer formation. Prostate cancer is mostly malignant and occurs after benign prostatic hyperplasia; this condition is also significantly associated with aging. Herbal extracts can be beneficial for the treatment of prostate cancer, alongside other commonly applied treatments. The purpose of this study was to review effective herbal extracts in the treatment of prostate cancer and identify the most important compounds of these extracts and their effective mechanisms.

Materials and Methods: For data collection, keywords such as "prostate cancer", "extract", "herbs" and "cancer", along with their Latin equivalents, were searched in international databases including Science direct, PubMed, Scopus, Medline and Springer. Finally, 52 articles were found. Fourteen articles were

excluded from the study due to irrelevance or lack of access to the original manuscripts. The articles were published between 2005 and 2015.

Results: In this study, 38 herbal extracts including green tea, saw palmetto, cork tree, Azadirachta indica leaves, colocynth and hibiscus tea were evaluated. Effective compounds in these herbs included β -sitosterol, stigmasterol, saponin, coumarin, crocin, nimbin and azadirachtin. Among the most important and effective mechanisms of these extracts, we can mention the increased expression of p53 protein, decreased p27 and p21 expression, changes in NF κ B expression and apoptosis induction, inhibition of P13K/Akt pathway, decreased acid phosphatase level and lipid peroxidation, reduced PCNA expression and induction of superoxide dismutase; in total, these mechanisms could inhibit cell cycle and proliferation.

Conclusion: Common treatment modalities such as radiotherapy and chemotherapy have various side-effects for patients. According to the findings, we can conclude that herbal extracts can induce apoptosis and inhibit cell proliferation in prostate cancer, given the presence of antioxidant substances through the mentioned mechanisms.

Keywords: Extract, Herbs, Prostate cancer, Treatment

HN10109001035

The effect of acupuncture on pain intensity in primary dysmenorrhea

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Objectives: Primary dysmenorrhea is highly prevalent and causes work loss and discomfort. Regarding the critical role of women in family and society it is necessary that proper investment for improving their mental and physical health to be taken into account. So this study was designed to investigate the effect of acupuncture on pain intensity in college students who suffered from primary dysmenorrhea.

Methods and Materials: In this clinical trial 100 students who suffered from primary

dysmenorrhea were randomly allocated in two equal acupressure and sham groups. At the beginning of study the demographic characteristics as well menstrual history, physical activity, vital signs, and also menstrual pain intensity were recorded. Treatment was given during two consecutive menstrual cycles when the subjects suffered from dysmenorrhea. In both groups acupressure was done in two 15-minutes time periods with 30 minutes interval during 6 hours after onset of dysmenorrhea in each cycle. In acupressure group the pressure was given on UB₂₃, UB₂₈, Ren₃, Ren₄, SP₆, SP₉, O₅₅ and O₈₈ points, and in sham group on placebo points using single blind method. Pain was measured using V.A.S (Visual Analogue Scale) in 30 min, 1 hr., 2hr. and 3hr. interval after intervention.

Results: The results showed that mean pain scores before (8.2±1.6) and after acupressure (2.6±1.3) in acupressure group was significantly different. Also there was a significant difference between mean pain score before and after intervention in acupressure and sham groups (p<0.001).

Conclusion: This study showed that acupressure at specific points in lumbar, abdominal and ear area reduces the pain intensity due to primary dysmenorrhea. Therefore acupressure could be used as a non-medical, inexpensive and safe method to decrease pain in girls and women who suffer from dysmenorrhea.

Keywords: Acupressure, Pain intensity, Dysmenorrhea

HN10107890796

A comparison between intralesional glucantime and combined use of topical *Berberis vulgaris* root extracts and intralesional glucantime in the treatment of cutaneous leishmaniasis

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Objectives: Cutaneous leishmaniasis is regarded as one of the most important diseases, worldwide, particularly in developing countries. Use of pentavalent antimonials is the only standard treatment for this condition. Considering the long duration of treatment, high costs, the side-effects and resistant cases, efforts have been made to use herbal medicines as an alternative. This study was performed with respect to the non-detrimental nature, low costs and availability of *Berberis vulgaris* in Iran and its effectiveness in cutaneous leishmaniasis in mouse models.

Materials and Methods: In this prospective double-blinded study, 20 patients (27 lesions) were treated by weekly use of intralesional glucantime in addition to a topical cream containing 10% *Berberis vulgaris* root extracts three times a day for eight weeks (case group). Also, 20 patients (29 lesions) were treated by weekly intralesional glucantime and a topical placebo cream for eight weeks (control group). Clinical response of both groups was evaluated at the end of the final session and six weeks following the treatment.

Results: By the end of the final session, slight, partial, significant and complete treatment was achieved in 14.8%, 44.4%, 29.6% and 11.1% of patients in the case group, respectively. The corresponding values in the control group were 20.6%, 31%, 48.3% and 0%, respectively; no statistically significant difference was observed between the groups (p=0.73). Six weeks after the treatment, slight, partial, significant and complete treatment was achieved in 0%, 7.4%, 33.3% and 59.3% of patients in the case group, respectively. The corresponding values were 6.8%, 17.2%, 17.2% and 58.7% in the control group, respectively; however, no significant difference was observed between the groups (p=0.80).

Conclusion: As the results indicated, adjuvant use of topical *Berberis vulgaris* root extracts did not enhance the therapeutic effects of intralesional glucantime in cutaneous leishmaniasis.

Keywords: *Berberis vulgaris*, Cutaneous leishmaniasis, Glucantime

HN10104180471

The effect of guided imagery and relaxation in reducing mental and emotional distress of patients with chronic renal failure

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Objectives: Chronic renal failure psychologically is very stressful for the patient and their relatives. The unexpected occurrence of chronic renal failure significantly challenges emotional capacities and defense mechanisms of the patients. Chronic psychological distress and dissatisfaction with the quality of life is observable in patients with chronic kidney disease.

Materials and Methods: This study was a clinical trial to determine the effect of guided imagery in reducing the effects of psychological and emotional factors in patients with chronic renal failure. Seventy-three patients were enrolled in this study and were randomly divided into treatment and control groups. Visualization and relaxation sessions were conducted in a quiet room. Meetings were held for 9 weeks, three sessions per week, each session lasting 90 minutes.

Results: ANOVA statistical measurement showed that after intervention, there was a difference between the two groups in terms of psychological side effect ($F=4.406$, $df=35$; $p=0.046$). Twenty-one patients in the intervention group showed a significant reduction in terms of psychological symptoms within nine weeks compared with the control group ($p<0.001$). Members of the control group showed no change in stress levels over 9 weeks.

Conclusion: The results of this study demonstrated that guided imagery may reduce the effects of stress in patients with chronic kidney disease.

Keywords: Guided imagery, Relaxation, CRF (chronic renal failure), Emotional problems

HN10108941023

Black cohosh for hot flash: a Meta analysis update

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Objectives: Menopause is a natural biological process that is eventually experienced by all women. A physiologic event, menopause, marks the transition in life that occurs in for women who reach midlife. A variety of changes can be made in the form of: biological, psychological, mental and social, to bring about the process. With respect to the high incidences of hot flashes in postmenopausal women and the controversies regarding its treatment, the aim of this review was to assess the effectiveness of ginseng as a treatment option for managing menopause symptoms.

Material and methods: We have done an update of 2012 meta analysis for assessing the effectiveness of sa on hot flashes. A systematic search of three databases (PubMed, Embase, and Cochrane library) was conducted to identify the relevant literature from 2011 all the way up to 2015.

In total 12 RCTs was included in our systematic review. Nine RCTs was related to previous Meta-analysis, and three new articles met inclusion criteria in our new search from 2012 up to 2015.

Result: Frequency of hot flushes five trials were suitable for analysis; they reported hot flush frequency per day or per week. No statistically significant differences in the mean number of hot flushes per day between the black cohosh and placebo groups were found (MD 0.07; 95% CI =0.43 to 0.56; $p=0.79$). The two trials

reporting hot flushes per week were unsuitable for pooling owing to high heterogeneity between them ($I_2 = 91\%$) for which there was no clear explanation. One of these trials found no significant difference between the groups (-2.90; 95% CI=12.89 to 7.09; 65 women), while the second reported significantly fewer hot flushes in the placebo group (17.89; 95% CI=9.57 to 26.21). Regarding the intensity of hot flushes, three trials were suitable for analysis. The difference in the mean intensity of hot flushes between treatment groups was not statistically significant (MD 0.12; 95% CI=0.06 to 0.30; $p=0.19$). In two of the new articles that was based on the Iranian database, a significant difference in the mean number of hot flushes per day between the black cohosh and placebo groups was shown.

Conclusion: Black cohosh is one of the most popular and frequently used herbal medicines for treatment of menopausal vasomotor symptoms. As no known side effects are associated with its use, it is highly recommended for all menopausal women, especially those with contradiction in HRT to use black cohosh.

Keywords: Black cohosh, Menopause, Hotflash

HN10101440341

Assessment of clot lytic effect of *Carthamus tinctorius* (Golrang)

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Objectives: *Carthamus tinctorius*, also known as Kafeshe, Golrang and Kajirein Persian, is an herb from Compositea family and its seed is traditionally called Ghortom. Flowers of

Carthamus tinctorius are usually used as a food flavoring agent. Flower and oil of *Carthamus tinctorius* are considered as antithrombotic and anticoagulative agents in Iranian traditional medicine. In this study, the effects of different concentrations of *Carthamus tinctorius* extract were assessed on clotlysis. Several in-vitro models have been developed to study clot lytic activity of thrombolysis, but all of them have certain limitations. One of these limitations is hemolysis.

Materials and Methods: Whole blood from healthy individuals was allowed to form clots in re-weighed sterile micro tubes; serum was removed and clot was weighed. After lysis by seven different concentrationsof flower extract (1.25 to 20%) fluid was removed and the remnants of the clot were re-weighed with tubes. Percentage of clot lysis was calculated on the basis of the weight difference of micro tubes obtained before and after clot lysis. Also, upper fluid was used for hemolysis detecting by two methods: 1-potassium measurement 2-microscopy.

Results: The significant percentage of clotlysis was observed when higher dosesof *Carthamus tinctorius* extracts were used (about 13.5%) in contrast with normal slain as a negative control (1-2%). Also no hemolysis was observed in all concentrations.

Conclusion: *Carthamus tinctorius* extract has clot lytic activity in-vitro, furtheranimal studies are needed for confirming this idea.

Keywords: *Carthamus tinctorius*, Clot lysis, In-vitro study, Iranian traditional medicine

HN10106900590

Fibromyalgia and chronic fatigue syndrome from Avicenna's viewpoint

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Objectives: Fibromyalgia and chronic fatigue syndrome are medical conditions, which often occur simultaneously and are characterized by extensive pain and persistent fatigue. These patients suffer from disabilities and impairments in social and physical functions. The aim of this study was to investigate the clinical presentations and pathophysiology of disorders which match fibromyalgia and chronic fatigue syndrome in traditional Iranian medicine.

Materials and Methods: The "Canon of Medicine", which is a major traditional Iranian medicine reference, was reviewed using keywords such as "E'aya", "Ta'ab", "Kasalan", "Seghl", "Tahabboj" and "Tarahhol". Scientific databases including Medline, Scopus, Google Scholar and Iran Medex were also searched, using the following keywords: "fibromyalgia", "chronic fatigue syndrome", "traditional Iranian medicine", "pain disorder", "complementary and alternative medicine" and "Iranian medicine".

Results: According to traditional Iranian medicine, the term "E'aya" could match the symptoms of fibromyalgia and chronic fatigue syndrome. Avicenna believed that strenuous physical activity contributes to the onset of some types of fatigue. He classified fatigue into four major groups: 1) "E'aya Ghoruhi" or "ulcerous fatigue", 2) "E'aya Varami" or "inflammatory fatigue", 3) "E'aya Tamaddodi" or "tension fatigue" and 4) "E'aya Ghashafi" or "dry fatigue". Overall, the clinical symptoms and management strategies vary in each type.

Conclusion: The multifaceted nature of fibromyalgia and chronic fatigue syndrome in traditional Iranian and classic medicine suggests multidisciplinary therapies for the management of these disabling conditions. Traditional Iranian medicine has suggested many strategies for the management of these conditions. The results of the present study can be applied for future clinical trials.

Keywords: Fibromyalgia, Chronic fatigue syndrome, Traditional Iranian medicine, Pain disorder, Iranian medicine

HN10106900591

Evaluation of the clot-lytic effect of *Capparis spinosa* L. extracts

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Objectives: According to traditional Iranian medicine resources, *Capparis Spinosa* L. (caper) has several properties against blood circulation disturbances in neurological disorders. The most significant effect of caper is dissolving phlegm and soda (by reducing blood viscosity and concentration). The present study aimed to explore the possible anti-thrombotic and anti-coagulative effects of caper extracts.

Materials and Methods: Hydro-ethanolic extracts from the aerial parts of caper were used at different concentrations (1.25-10%). Whole blood samples were obtained from healthy individuals to form clots in sterile microtubes; then, the serum was removed and the clot was weighed. Caper extract was added to the clot and after 90 minutes, using four different concentrations of the extracts, the fluid was removed and the remnants of the clot were re-weighed with the tubes. The percentage of clot lysis was calculated, based on the weight difference of microtubes before and after clot lysis. To evaluate hemolysis, the extra fluid was analyzed via potassium measurement and microscopy.

Results: *Capparis Spinosa* L. extracts could significantly decrease the percentage of clot lysis (about 18.5%) in comparison with normal saline, used as the negative control (1-2%). Hemolysis was not observed in all concentrations of the extract in this study.

Conclusion: The present results revealed clot-lytic effects of caper. Caper was suggested as a potential source of natural antithrombotic agents, with possible medical applications. However, further research is required to confirm these findings.

Keywords: *Capparis Spinosa* L., Caper, Clot lysis, In vitro study, Traditional Iranian medicine

HN10107850765

The effect of hydroalcoholic extract of *Kelussia odoratissima* on rat ileum contractions and determination of its mechanism

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Objectives: *Kelussia Odoratissima* is one of the most commonly used herbs in traditional medicine. For this herb, numerous desirable properties, especially anti-spasm features, have been mentioned in traditional medicine. Nowadays, this herb is used for treating digestive disorders; however, the advantages of this herb have not been determined in any reliable scientific study. This study aims to evaluate the hydroalcoholic effects of this herb's leaves on rats' ileum contractions.

Materials and Methods: In this interventional study, 48 Wister rats (150-200 gr) were randomly divided into six groups of eight i.e., the groups receiving cumulative concentrations of the *Kelussia Odoratissima* extract, propranolol, naloxone, L-NAME and Calcium Chloride and the control group. In order to evaluate the effect of this mechanism, ileum was incubated

with beta-adrenergic receptor antagonists (1 μ M Propranolol), opioid receptor (1 μ M naloxone) and nitric oxide synthase inhibitors (100 μ M L-NAME). It was also exposed to different doses of calcium chloride, and the contractions under one gram tension were recorded with isotonic method in an organ bath containing Tyrode's solution at 37°C and PH 4/7 and by adding 60 mM of potassium chloride. Then, the percentage of changes was calculated, and ANOVA and t-test were performed using SPSS. p-values less than 0.05 were considered significant.

Results: It was found that the 10-20% cumulative concentrations of hydroalcoholic extract of *Kelussia Odoratissima* significantly reduced the contractions induced by potassium chloride ($p < 0.001$). The intervention of beta-adrenergic receptor antagonists (1 μ M Propranolol), opioid receptors (1 μ M naloxone) and nitric oxide synthase inhibitors (100 μ M L-NAME) on Ileum showed that propranolol reduces the inhibitory effect of contractions induced by potassium chloride ($p < 0.05$). But L-NAME and Naloxone did not increase the inhibitory effect of the extract on Ileum. Moreover, calcium caused contraction in depolarized tissue by potassium chloride, and this contraction effect was decreased by cumulative concentrations ($p < 0.001$).

Conclusion: The results show that hydroalcoholic extract of *Kelussia Odoratissima* inhibits the ileum contractions of rats by affecting voltage-dependent and beta-adrenergic receptors, and it can be used for relieving intestinal spasms and diarrhea.

Keywords: Diarrhea, Ileum contractions, *Kelussia odoratissima*, Rat

HN10105310392

Prevention of behavioral disorders through laughter therapy

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Objectives: Laughter is a component appearing on the face, and is a symbol of man's inner feelings. All our feelings manifest themselves as behaviors, and one of the good feelings is happiness and satisfaction, which can show itself in the form of laughter. Sense of humor is of the features of healthy people, and even in the sick it helps with decreasing pain and discomfort.

Materials and Methods: Our team chose 60 articles from the year 1990 to 2013 using the keywords including "laughter therapy", "sense of humor" and "behavioral disorders" to search databases like Google, Google Scholar, Tebyan, Shia medicine, Rasekhoon, and in foreign and Iranian journals like IranMex, Medlib, Science Direct, Up to Date, SID. Then, the results of the study were extracted from them.

Results: Sense of humor is one of the properties of a healthy individual, and it even decreases pain and discomfort in the sick people. Between the years 1990 and 2000, studies done on water crystals showed that the crystals formed beautiful shapes when laughing in front of them. The same happens in human body, because three-quarters of our body is water, it can also affect our minds. Laughing can be effective in bolstering the immune system; additionally, it is associated with learning and dealing with physical illnesses. Laughing can be an exercise for face muscles. The muscles of mouth, nose, cheeks and around eyes move during laughing, which leads to blood circulation and a fresher skin. Laughing and humor are positive methods for expressing feelings and pleasant emotions, and it has a very positive impact on our mind and soul. When an individual is faced with social and financial problems, in addition to amending emotional communication of people with each other, it can affect the mental and physical health of human beings.

Conclusion: Studies show that joking and laughing increase peoples' power to deal with pain. Laughter makes us feel more relaxed and at the same time, it is better than most drugs when it comes to the physical health. Therefore, the research team was able to take an effective step towards reducing financial costs, drugs use and the need for the mentally ill to be hospitalized using the laughter therapy hypothesis.

Keywords: Behavioral problems, Laughter

therapy, Sense of humor

HN10106590802

Treatment of cutaneous leishmaniasis using berberis vulgaris: a case report

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Objectives: Cutaneous leishmaniasis is a common disease, which is prevalent in 89 countries, including Iran. Anthroponotic cutaneous leishmaniasis (ACL) is highly prevalent in Mashhad, located in the Eastern part of Iran. In most cases, leishmania tropica is the main cause of ACL in Mashhad. Some of the consequences of ACL are chronic wounds, secondary infections, excessive scarring and cosmetic problems. Use of pentavalent antimonial compounds is the first-line treatment procedure for cutaneous leishmaniasis. However, most patients are inclined to receiving local treatments due to the fear of injection and adverse side effects of these drugs. Recently, Berberis vulgaris has been used in the treatment of animal models, and there are reports on the treatment of cutaneous leishmaniasis using this medicinal herb.

Case report: A 62-year-old woman with eight nodular lesions (dry and crusted in the center) in the upper limbs and forehead was referred with laboratory confirmation of cutaneous leishmaniasis. The patient was opposed to conventional treatments and was amenable to the treatment plan. After obtaining informed consent from the patient, treatment was performed using Berberis vulgaris 20%, three times daily. Wound scabs were gently removed every evening during two weeks. In the next stage, Berberis vulgaris was used

topically, and indurated skin lesions reduced by the end of the first week. Eventually, seven lesions were fully recovered, while one lesion had 75% of improvement by the 8th week of treatment. By the end of the 10th week, full recovery was observed in all the lesions.

Conclusion: According to this case study, *Berberis vulgaris* could be effective in the treatment of cutaneous leishmaniasis. Therefore, it is recommended that future evaluations be conducted on the efficacy of herbal medications.

Keywords: *Berberis vulgaris*, Cutaneous leishmaniasis, Herbal treatment

HN10108110848

Olfactory stimulation with fresh rose flowers: a systematic review of aromatherapy

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Objectives: Aromatherapy is inhaling concentrated essence from various types of plants such as rose flowers to promote physical and psychological well-being. In this review, all the quantitative studies on the effect of rose essential oil inhalation, which were conducted during 1990-2014, were investigated.

Materials and Methods: Ovid Medline, Google scholar, CINAHL, Science Direct and PubMed databases were searched to obtain articles evaluating the effect of rose essential oil inhalation on human health.

Results: The search yielded nine quantitative studies, including six randomized controlled trials examining aromatherapy. The majority of the findings suggested positive psychological effects such as anxiety, depression and sleep quality improvement. In a clinical trial, fresh rose flowers induced a significant increase in parasympathetic nervous activities, improved the vital signs of patients after coronary artery bypass surgery and increased comfortable

feelings in irritable bowel syndrome disorder. In addition, a study demonstrated that it can effectively reduce renal colic. In other studies, it was more effective than massage therapy in menopausal and postpartum depression. One study reported that olfactory stimulation with fresh rose flowers did not cause any significant changes to patients' perception of self-esteem. No adverse effects were reported.

Conclusion: Aromatherapy, having no significant side effects, could be applied as a complementary therapy for patients with psychological disorders and in postoperative pain management, together with other common treatments.

Keywords: Complementary; Aromatherapy, Rose Flowers, Psychological Disorders

HN10105480411

Effects of aqueous extracts from the dried calyx of sour tea (*Hibiscus sabdariffa* Linn.) On polygenic dyslipidemia: a randomized clinical trial

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Objectives: Dyslipidemia is regarded as a major risk factor for coronary heart disease. Complementary and alternative medicine plays a significant role in the treatment of dyslipidemia. Controversial findings have been reported regarding the effects of sour tea (*Hibiscus sabdariffa*L.) on dyslipidemia. The aim of this study was to evaluate the effect of aqueous extracts from the dried calyx of sour tea on polygenic dyslipidemia.

Materials and Methods: This controlled, randomized, clinical trial was conducted on 43 adults (6 males and 37 females), aged 30-60 years with polygenic dyslipidemia and no prior history of other conditions. The subjects were randomly assigned to intervention and control groups. The control group was trained on lifestyle modifications at baseline. On the other hand, in addition to lifestyle modifications at baseline, the intervention group received two cups of sour tea daily between meals; the both groups were followed-up for 12 weeks. Lipid profile was measured at baseline and within 6- and 12-week intervals following the intervention. Dietary intake and physical activity were assessed at baseline and within a 12-week interval.

Results: After 12 weeks of intervention, the mean concentrations of total cholesterol, high-density lipoprotein-cholesterol (HDL-C) and low-density lipoprotein-cholesterol (LDL-C) significantly decreased by up to 9.46%, 8.33% and 9.80%, respectively in the intervention group, compared to the baseline values. On the other hand, LDL-C/HDL-C ratio significantly increased by up to 3.15% in the control group after 12 weeks in comparison with the baseline values. The current study revealed a significant difference in HDL-C concentration between the intervention and control groups; however, no difference was observed between the two groups regarding other lipid profiles.

Conclusion: It was concluded that sour tea may have significant positive effects on lipid profile in individuals with polygenic dyslipidemia, which may be attributed to its anthocyanins and inflation factor. Therefore, sour tea intake with the recommended dietary patterns, along with physical activity, can be effective in the

regulation of lipid profile in patients.

Keywords: Hibiscus sabdariffa L, Polygenic dyslipidemia, Sour tea, Lipid profile

HN10102340097

Strategies for the promotion of Iranian traditional medicine in educational institutions

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Traditional medicine has been gaining growing recognition in different universities and educational institutions in our country. This phenomenon has many advocates, as well as several opponents. This study aimed to offer suggestions as to facilitate the use of alternative medicine training in educational institutions, while increasing the popularity of these methods among different scholars. Some of these suggestions are as follows:

1. Standard deviation of the mean age of incoming students should be correspondent with the students of other majors at a university.
2. Research resume of students should be emphasized in their interviews.
3. Localization of students should be prioritized in different regions.
4. Thesis of students should be used to design textbooks and standard educational guidelines in the future.
5. Standard health centers should be established by the Deputy of Iranian-Islamic Medicine in interaction with the Deputy of Health in all provincial capitals.
6. Deputy of traditional medicine should be correspondent with the ministry of education in other medical universities.
7. Nationwide tests about the applications of traditional medicine should be made mandatory and virtually organized with adequate rating for all faculty members in order to improve their knowledge about traditional medicine.
8. Compulsory apprenticeships should be organized by the ministry of educational

affairs for the management of educational institutions.

9. Minimum of necessary arrangements should be created for educational programs on alternative medicine in type one, two and three universities.
10. General competitions about the applications of Iranian medicine should be planned for health care staff to raise their awareness.

Keywords: Iran, Traditional medicine, Iranian medicine, Promotion

HN10106210497

Evaluation of the effects of rosemary on job burnout in the personnel of chemical industries in Iran

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Objectives: Job burnout is an important problem in different occupations, which could lead to other health issues and adversely affect social and economical system. Use of medicinal plants could be effective in reducing the incidence of job burnout. This study aimed to investigate the effects of rosemary on job burnout among industrial workers in Iran.

Materials and Methods: This experimental study was conducted on 66 employees at technical units of Iran chemical industry (age range: 20-60 years). Participants were randomly divided into two groups of control (N=33) and experiment (N=33). Subjects in the experimental group received 4 grams of rosemary brewed in 150 cc of water daily for two months. During this period, control subjects received no intervention. Job burnout score was measured before, during and after the intervention using the Galdard Burnout Inventory (GBI) (1989). Data analysis was performed using independent and paired t-test.

Results: According to the statistical analysis,

score of job burnout had a significant difference between the study groups after the intervention, and use of rosemary infusion effectively reduced the rate of job burnout among the employees. Moreover, no significant correlations were observed in the demographic data and level of job burnout among the subjects.

Conclusion: According to the results of this study, rosemary had significant effects on the reduction of job burnout among industrial personnel. Therefore, it is recommended that future studies be conducted in this regard.

Keywords: Job burnout, Rosemary, Chemical industries, Iran

HN10108270880

The effect of acupressure on spontaneous breathing in patients under mechanical ventilation

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Objectives: Mechanical ventilation (MV) is the most common technological intervention for patients admitted to the intensive care unit (ICU). Although MV is an important life-saving intervention, numerous complications can occur while the patient is under MV. Therefore, taking appropriate measures to reduce MV use duration is of utmost importance. Acupressure, known as a non-pharmacological approach, can improve patient's respiratory status without having any side effects. This study aimed to determine the effect of acupressure on spontaneous breathing of patients under MV.

Materials and Methods: This was a randomized clinical trial and a randomized block was employed to assign each patient to the treatment or control group. A total of 164 hemodynamically stable patients under MV were randomly placed in the experimental and control groups. Age, gender, body mass index, smoking, using steroids and bronchodilators were blocking agents. The patients who received acupressure (twice a day) together with the routine care were located in the experimental group and the patients in the control group only received routine care. In each session, the spontaneous breathing rates and expiratory tidal volume were measured before, immediately after, 30 minutes and one hour after intervention. The data were analysed by means of SPSS software.

Results: The mean number of spontaneous breathings per minute in the experimental and control groups were 11.80 ± 9.18 and 9.87 ± 7.49 , respectively ($p=0.143$). The mean expiratory tidal volume in the two groups were 489.71 ± 149.04 ml and 507.89 ± 160.81 ml, respectively ($p=0.454$). The results suggested that there was a statistically significant improvement in the number of spontaneous breathings in the experimental group as compared to the control group ($p=0.025$). However, there was no significant difference in the expiratory tidal volume between the experimental and control groups ($p=0.157$). In all the sessions, there was a significant difference between spontaneous breathing and expiratory tidal volume in experimental group as compared to the control group immediately ($p<0.001$) and 30 minutes ($p<0.05$) after the intervention. Moreover, in the experimental group, time-dependent changes in the number of spontaneous breathing was not significant ($p=0.313$); however, changes in the expiratory tidal volume were significant ($p<0.001$). Additionally, in comparison between the two groups, there was no significant difference in the number of spontaneous breathings, but there was a significant difference in expiratory tidal volume 30 minutes after intervention in the first and second sessions and one hour after intervention in the third and fourth sessions ($p<0.001$). Finally, the study of the rate of changes in the two variables showed that there were no significant differences among the various sessions.

Conclusion: According to the obtained results, acupressure significantly improved the spontaneous breathing rate in the experimental group as compared to the control group. In addition, the expiratory tidal volume had significantly improved as a result of acupressure. These results (which can be helpful for ICU personnel) demonstrated that acupressure can be effective in promoting respiratory status of patients under MV.

Keywords: Acupressure, Complementary medicine, Expiratory tidal volume, Mechanical ventilation, Nursing, Performance of spontaneous breathing, Respiratory rate
HN10107280931

Hyssopus officinalis from the perspective of modern and alternative medicine

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Objectives: Hyssop (*Hyssopus officinalis*) has been used for medicinal purposes since ancient times. In modern and alternative medicine, numerous medicinal properties of hyssop have been mentioned.

Materials and Methods: In this descriptive review, information was obtained from the primary sources of traditional Iranian medicine and other complementary and alternative medical schools. Medical databases were searched for phytochemical, in vitro and in vivo properties of hyssop and its benefits that are mentioned in alternative medicine.

Results: In the survey on in vitro and in vivo properties of *Hyssopus officinalis*, antioxidant activity, antimicrobial, antifungal and antiviral effects, spasmolytic action, asthmatic relief and inhibition of complex carbohydrates digestion were observed. On the other hand, complementary and alternative literature have suggested carminative, sedative, tonic, expectorant, antispasmodic and diuretic

properties of Hyssop and its impact on chronic cough, bronchitis and asthma.

Conclusion: According to the phytochemical and phytopharmacological properties of this plant, authors suggest its usage in the treatment of some respiratory, intestinal and other disorders that may have not an effective treatment in conventional medicine.

Keywords: Hyssop, *Hyssopus officinalis*, Traditional Iranian medicine, Alternative medicine

HN10101100710

Neuroprotective effect of silymarin on acrylamide-induced neurotoxicity in both in-vitro and in-vivo assessments

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Objectives: Acrylamide is a well-known toxic chemical, which has broad applications in several industries. Different mechanisms including induction of oxidative stress and apoptosis are involved in acrylamide(ACR)-induced toxicity. Regarding the potent antioxidant properties of silymarin, the important constituent of *Silybum marianum*, the possible protective effect of silymarin against ACR-induced toxicity on Wistar rats and PC12 cells was evaluated.

Materials and Methods: Animals were treated with ACR (50 mg/kg, ip) for 11 days to induce toxicity. Silymarin (40, 80 and 160 mg/kg, ip) was used during the treatment with ACR. At the end of treatment, the behavioral index was evaluated. For the in-vitro assay, PC12 cells were used as a suitable in-vitro model. Cells were exposed to different concentrations of silymarin for 24 hours, then ACR with IC50 concentration (5 μ M) was added to the cells. Finally, cell viability was determined using MTT assay.

Results: In Wistar rats, exposure to ACR

significantly induced severe gait abnormalities, but treatment with silymarin (160 mg/kg) reduced ACR- induced neurotoxicity in animals. ACR decreased cell viability, and pre-treatment with silymarin significantly decreased ACR- induced cytotoxicity in a dose-dependent manner.

Conclusion: The neuroprotective effect of silymarin in this study can be due to inhibition of oxidative stress, since silymarin has shown antioxidant effects in various studies.

Keywords: Acrylamide, Antioxidant, Neurotoxicity, Silymarin

HN10106370514

A comparison of the efficacy of olive oil, aloe vera extract and breast milk on healing breast fissure in the breastfeeding women

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Objectives: Breast fissure is a common problem in breastfeeding mothers causing premature discontinuation of breastfeeding. Given the high prevalence of breast fissure, as well as analgesic and anti-inflammatory effects of olive oil and aloe vera, this study was performed to compare olive oil, aloe vera extract and breast milk in terms of lowering the intensity of pain and breast fissure in breast feeding mothers.

Materials and Methods: This clinical trial was

performed on 90 breastfeeding mothers with breast fissures. The participants were randomly divided into three groups of 30, in 2015. In the first group, mothers rubbed 0/5 ml of olive oil and in the second group the participants rubbed 0/5 ml of aloe vera extract on their nipple and areola three times a day. In addition, after each breastfeeding both groups rubbed 3-4 drops of milk on their nipple and areola. The third group, after each breastfeeding, rubbed 3-4 drops of milk on the nipple and areola. The visual analogue scale was used for determining the intensity of pain, and Store Scale was completed for evaluating the intensity of breast fissure on the first (before), third (during the intervention) and seventh days (at the end of the intervention). Data were analyzed performing ANOVA, Kruskal-Wallis and wilcoxon tests using SPSS, version 22.

Results: The results demonstrated significant differences regarding intensity of pain and breast fissure in the three groups at the end of the intervention, and the aloe vera extract reduced the intensity of pain and breast fissure more than the other two. There was no significant difference between breast milk and olive oil. Moreover, within each group, intensity of pain and breast fissure was significantly different on the first and last days.

Conclusion: Olive oil, aloe vera extract and breast milk could reduce the intensity of pain and breast fissure, but aloe vera extract was most effective one.

Keywords: Aloe vera, Breastfeeding mothers, Breast fissure, Breast milk, Olive oil

HN10107760750

Evaluation of licorice extract cytotoxicity on Huh7 cell lines

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Objectives: Liver is the largest human body gland, and it is also the largest organ in vertebrates, which has a role in metabolic activities of body such as digestion. Liver is the main place for metabolism of proteins, carbohydrates and lipids, essential materials synthesis and detoxification of harmful products. Human hepatoma cell lines are known as Huh7. This cell line is also used for virus replication of Hepatitis C. Licorice extract is used in traditional medicine due to its anti-inflammatory features and defensive effects on liver and curing liver gastrointestinal diseases. This study is done with the purpose of evaluating the licorice extract cytotoxicity on Huh7 cell Lines.

Materials and Methods: A total of 1000 Huh7 cells were put in 100 ml of complete DMEM culture in 96 plates. The initial concentration of licorice extract was diluted in-vitro. Then, the cells were washed with PBS1X and the concentration of 100 ml was added to each well containing the cells. After 24 hours, 20 ml of MTT solution with 5 mg/ml density was added, and plates were incubated for four hours. The culture was discharged in wells and 100 ml of DMSO was added to each of them, and then they were mixed with a shaker for 15 minutes. After that nanometer absorption of each well was determined by microplate reader at 540 and 630 wavelengths.

Results: The results of MTT assay test showed that licorice extract (with initial 40 mg/ml density) was not deadly on Huh7 at less than 5 mg/ml densities.

Conclusion: According to the results, suitable non-fatal density of licorice extract can be used to evaluate its medical effects on cell cultures.

Keywords: Huh7 cell culture, Licorice extract, MTT test

HN10107880778

Evaluation of the toxic effects of *Nigella sativa* on human cell lines of hepatic origin

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Objectives: Herbal medicine is a good alternative for improving hepatic functions. Essential oils (thymol, Thymoquinone, and dithymoquinone) and active ingredients of *Nigella* have therapeutic effects such as: antioxidant, anti-inflammatory, anti-cancer and anti-flue effects. Huh7 is a line of hepatic cancer, which is used in studies on cancer and its treatment. The purpose of this study is to evaluate the toxicity of *Nigella sativa* on Huh7 human cell lines.

Materials and Methods: The toxicity of *Nigella sativa* was assessed by means of MTT test. In this method, 100 microliter of DMEM culture containing 10^4 Huh7 cells was put into 96-plate wells. After 24 hours, different dilutions (1.2) of the initial concentration of *Nigella Sativa* were prepared, and 100 microliters of it was added to the cells. After 24 hours, 20 microliter (5mg/ml) of MTT was added to each well plate, and after 4 hours, 100 microliter of DMSO was added to each one, and then the absorption level of each well was determined using ELISA plate reader at wavelengths of 590 and 630 nm. Tests were evaluated in the form of triplex repetition.

Results: The results of MTT test showed that *Nigella sativa* extract (with the initial concentration of 100mg/ml) was non-fatal on Huh7 cells in concentrations less than 25mg/ml.

Conclusion: Using the suitable non-fatal concentration of, it was concluded that this extract can be used to evaluate *Nigella sativa* medical effects such as antiviral and anti-cancer effects in cell culture.

Keywords: Huh7 cell culture, MTT test, *Nigella sativa*

HN10107200654

Recommended treatment methods of Iranian traditional medicine for female genital tract infections

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Objectives: Genital tract infection is common in females worldwide; it is accompanied by clinical symptoms like unnatural secretions from the cervix or vagina, fever, unnatural bleeding from the vagina, dyspareunia, vaginal itching, and adnexal tenderness. These symptoms, match those of a disease with continuous abnormal uterine discharge in Iranian traditional medicine. The usual treatment for this disease is using mostly broad-spectrum antibiotics; due to the complications of each, during the last few decades, other treatment methods have gained attention. Therefore, the purpose of this study was finding suggested treatments by Iranian traditional medicine sages for this disorder.

Materials and Methods: In this study more than 15 traditional medicine reference books in the field of treatment and pharmacology were investigated; items classified as singular or plural medicines were extracted, and after coding, adjusting and removing the duplications, they were categorized.

Results: More than 50 single medicines such as *Myrtus*, *Plantago major*, *Cynips gallae tinctoria*, anise, sumac, *Cinnamomum iners*, gooseberry, oak, vinegar, etc., and 20 compound medicines, which are combinations of single medicines were found. Depending on the particular case, they are used orally, as vaginal suppositories, manually in anus or uterus, in a tub, or as a poultice.

Conclusion: Considering the wide variety of recommended traditional medicines and their assorted usage methods for continuous bleeding from the vagina, recommendation to conduct empirical clinical trials and utilize these medicines, especially in cases of treatment restriction or treatment failure becomes common.

Keywords: Female genital tract infections, Traditional medicine, Continuous bleeding from the vagina, Antibiotics resistance

HN10105430650

The effect of probiotic yogurt on inflammatory factors in healthy young women

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Objectives: Probiotics are certain living microorganisms affecting the flora of the body, with anti-inflammatory effects and improving health. The present study is done with the purpose of evaluating the effects of probiotic yogurt on inflammatory factors in healthy young women.

Materials and Methods: In this empirical

study, 27 healthy female students were randomly divided into two groups of intervention (14 people) and control (13 people). The intervention group received 450 gr of probiotic yogurt and the control group received the same amount of simple yogurt for 14 days. Blood samples were taken before and after the intervention to measure inflammatory factors. Data was analyzed using Independent and paired t-tests.

Results: The results showed that 14 days of supplementation with probiotic yogurt in the intervention group decreased TNF- α , IL-6, hs-CRP serum levels, as compared to the beginning of the study and to the control group, but this decrease was not statistically significant.

Conclusion: Probiotic yogurt may improve health and change inflammatory factors, but further studies are required in this area.

Keywords: Healthy young women, Inflammatory factors, Probiotic yogurt

HN10106770582

The effects of massage therapy on the quality of life in patients with acute leukemia undergoing chemotherapy: a randomized clinical trial

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Objectives: Treatment of hematologic malignancies is generally not possible; it is only possible to relieve symptoms, improve the ability of patients and increase their longevity, so that they can keep living at an acceptable level of life quality. Therefore, in recent years the issue of quality of life is considered as the basic criterion in the evaluation of response to therapy. Thus, we decided to do more research with the goal of determining the effect of massage therapy on the quality of life of leukemia patients undergoing chemotherapy.

Materials and Methods: in this clinical trial, 60 patients with acute leukemia were divided into two groups of intervention and control. The intervention group received 4 weeks of back tapping massage (three 10-minute sessions a week, every other day). The dimensions of their quality of life were measured before intervention and also one week after the intervention (fifth week), using a short version of 36-question (SF-36) form in both groups. Statistical tests such as independent t-test and paired t-test were used to analyze data.

Results: The results show that the mean of quality of life dimensions was significantly improved after intervention, compared to before intervention ($p=0.001$). Also, there was no significant difference between the means of quality of life of the two groups ($p=0.46$), while after intervention it was significantly higher in the massage group ($p=0.001$).

Conclusion: Back tapping massage can be used as a safe and easy method to improve the quality of life, which is the main goal in curing patients with hematologic malignancies. Therefore, this kind of massage therapy should be part of oncology clinical team training programs and used for leukemia patients.

Keywords: Quality of life, Acute Leukemia, Chemotherapy, Massage therapy

HN10109011038

The effects of anti *Aspergillus* and anti Aflatoxin essences of *Cuminum cyminum*, *Ziziphora clinopodioides* and *Nigella sativa* growing in Khorasan region and the site of their effects

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Objectives: Considering the increasing clinical importance due to fungal infections and toxins, and increasing drug resistance fungi, essential oils may be a promising and suitable proposal.

Materials and Methods: In this experimental study, the mean of Minimum Inhibitory Concentration (MIC90) and Minimum Fungicidal Concentration (MFC) of the essences of *Cuminum cyminum*, *Ziziphora clinopodioides* and *Nigella sativa*, was certified against *Aspergillus fumigatus* and *Aspergillus parasiticus* in Broth Macro Dilution and in Broth Micro Dilution techniques. The analysis of chemical composition of the essential oils was performed by using gas chromatography/ mass spectrometry (GC/MS). The concentration of *Aspergillus parasiticus* aflatoxins was detected by High Performance Liquid Chromatography (HPLC) technique based on ng/ml (ppb). The measurements obtained from these results were then analyzed by the SPSS software and statistical tests Kruskal – Wallis and Mann-Whitney ($p \leq 0/05$). Conidial and mycelial samples exposed to essential oils were processed for transmission electron microscopy (TEM) based on broth dilution methods.

Results: According to the results of this study, the essential oils of *Cuminum cyminum* and *Ziziphora clinopodioides* showed the best and most tonic activity against both types of fungi ($0.25 \leq \text{MIC90} \leq 0.43$). In contrast *Nigella sativa* showed only a fairly moderate activity against them ($1.25 \leq \text{MIC90} \leq 1.75$). The ability of above-mentioned essential oils to prohibit producing of any Aflatoxins is as essences of *Cuminum cyminum* and *Ziziphora clinopodioides* and *Nigella sativa*. The main changes observed by TEM in the cell wall, plasma membrane and membranous organelles; in particular the biggest changes were seen in the nuclei and mitochondria.

Conclusion: The findings of this study have shown that *Cuminum cyminum*, *Ziziphora clinopodioides* and *Nigella sativa* essences have anti-fungal functions against *Aspergillus*. As a result of these findings; they may be used effectively in medical pharmacology, aromathrapy and alternative medicine.

Keywords: Essences, *Cuminum cyminum*, *Ziziphora clinopodioides*, *Nigella sativa*, *Aspergillus*

HN10109011040

Evaluation of the effects of Cuminum cyminum and Nepeta binaludensis essential oils on candida species in patients with Recurrent Vulvovaginal Candidiasis

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Objectives: The significant importance of Recurrent Vulvovaginal Candidiasis (RVVC), the profitable effects of medicinal herbs, the necessity of producing more effective antifungal drugs, wide variation in plants of the country, building trust in complementary and traditional medicine, restoring or establishing indigenous knowledge and doing coherent and scientific research, this study was done with purpose of determining the antifungal effects of Cuminum cyminum and Nepeta binaludensis.

Materials and Methods: In this empirical study, after providing and drying the desired herbs, their essence was extracted by hydro-distillation. Then, the components of the essences were determined by gas chromatography Linked to mass spectrometry (GC/MS). Anti-candida effects and the combination of the essences were determined by measuring the Minimum Inhibitory Concentration (MIC) and the Minimum Fungicidal Concentration (MFC) against the samples of patients with Recurrent Vulvovaginal Candidiasis (RVVC). The type of Candida yeast fungi was also determined using non-molecular and molecular methods.

Results: Both Cuminum cyminum and Nepeta binaludensis essences alone and the combination of these extracts have antifungal effects on Candidal samples in patients with recurrent

Vulvovaginal Candidiasis with of 95 percent confidence.

Conclusion: The antifungal effects of these essences on Candida strains in patients with Recurrent Vulvovaginal Candidiasis was determined using the findings of this study. The results of this study can be in producing vaginal creams or ointments for treatment of patients with RVVC.

Keywords: Nepeta binaludensis, Essence, Cuminum cyminum, Recurrent Vulvovaginal Candidiasis

HN10106750738

The effect of TQ (Nigella sativa extract) on the A_{2A} adenosine receptor gene expression in the lungs and blood lymphocytes of Hindi asthmatic guinea pigs

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Objectives: Studies show that Nigella sativa extract and its main component thymoquinone (TQ), have preventive effects on asthma and prevent pathologic changes. Since in asthma, the responses of the immune system and related cells such as T lymphocytes are affected, and one of the most important regulating factors in inflammation is adenosine and its receptors, therefore provoking A_{2A} adenosine can prevent releasing inflammatory mediators, and stop the activities of T cells. This study was performed to show the preventive effects of thymoquinone on A_{2A} gene receptor expression in blood lymphocytes and lung tissue in the presence of A_{2A} receptor antagonists (ZM241385).

Materials and Methods: Seventy Hindi guinea pigs were randomly divided into five groups: control (C), asthma (S), S+TQ, S+AntaA_{2A}, and

S+TQ+Anta A_{2A}. One day after the induction of asthma, animals were sacrificed and 5 ml of blood and 100 mg of left lung tissues were immediately removed. RT-PCR was performed to evaluate the A_{2A} gene receptor expression levels.

Results: Blood lymphocytes: In comparison with the control group, gene receptor expression of A_{2A} was significantly decreased in the S group ($p < 0.05$), and significantly increased in the S+TQ group ($p < 0.001$). There were no significant differences in S+Anta A_{2A} and S+TQ+Anta A_{2A} groups.

Lung tissue: In comparison with the control group, gene receptor expression of A_{2A} showed a significant decrease in the S group ($p < 0.05$), and there was no significant difference in S+TQ and S+Anta A_{2A} and S+TQ+Anta A_{2A} groups.

Conclusion: Prescribing thymoquinone for treatment of blood lymphocytes and lung tissue leads to an increase in A_{2A} gene receptor expression, and this increased expression is more in blood lymphocytes than lung tissue.

Keywords: Nigella sativa extract, Thymoquinone, A_{2A} adenosine receptors

HN10106390522

Application of genetic algorithm for determining the optimal home-based traditional treatment of pain control in dental injuries

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Objectives: Today, tooth pain has become a common problem in the community. Due to increased pain intensity by the end of the night, dentist referral is not feasible; therefore, reducing

dental problems is highly required. In this study, the optimal traditional methods for home-based dental pain control were evaluated, using the genetic algorithm (GA).

Materials and Methods: In GA, dental pain management, 15 traditional medicines (based on severity, pain intensity, treatment effectiveness and patient satisfaction) and eight other factors were considered as the input data of GA, and the optimal traditional method of home-based dental pain control was the output of the algorithm.

Results: The results were based on optimal treatment satisfaction, treatment effects, duration of recovery, the associated side-effects and ease of use, respectively. Based on medical studies on 220 cases, the most efficient home-based treatment for dental pain was the use of cloves. Also, use of lime was regarded as the optimal treatment method. Based on the GA output, use of tea bags resulted in reduced symptoms of trauma therapy.

Conclusion: Based on the findings, use of cloves and lime was considered effective in reducing the symptoms of trauma therapy.

Keywords: Dental, Cloves, Genetic algorithms, Pain, Optimization

HN10105000486

Investigation of chamomile in traditional Iranian medicine literature

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Objectives: Chamomile is one of the most important medicinal herbs of the Asteraceae family. The properties of this herb have been known since ancient times and its usage today is still widespread. The purpose of this study was to investigate the therapeutic effects of chamomile in traditional Iranian medicine literature.

Materials and Methods: In this review study, traditional Iranian medicine resources were investigated.

Results: Ancient scientists and scholars were familiar with chamomile and its medicinal indications. Avicenna, Jorjani and Ibn al-Beitar have mentioned the medicinal effects of this herb

on nervous system disorders, brain and nervous system, headache relief, pain reduction in the liver, viscera, rectum and guts, treatment of fever caused by infections, digestive disorders, colic, jaundice, bladder stones and respiratory system disorders. Moreover, chamomile is known to be effective in the treatment of various inflammations and rashes. Chamomile oil eliminates fatigue and is also effective in pain of the uterus and convulsion.

Conclusion: Chamomile has various therapeutic effects. Different species of this herb and its compounds have been identified in pharmaceutical sciences and used in medicine. Chamomile has different species such as *Matricaria chamomilla* var. *chamomilla* (Shirazi chamomile), *Matricaria chamomilla* var. *recutita* (aromatic chamomile), *Tripleurospermum disciforme* (field chamomile) and *Anthemis nobilis* L. (Roman chamomile). Nowadays, various chamomile products are available in the market in form of creams, lotions, oral drops and powder. Further clinical trials are required to confirm its properties.

Keywords: Chamomile, Traditional medicine literature, Therapeutic effects

HN10101370390

Anti-Candida effects of *Allium ascalonicum*, *Marticaria chamomilla* and *Stachys lavandulifolia* extracts

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Objectives: This study aimed to evaluate and compare the antifungal activities of *Allium ascalonicum*, *Marticaria chamomilla*, and *Stachys lavandulifolia* on *Candida albicans*.

Materials and Methods: In this study the plant extracts were prepared using 70% ethanol and the maceration method. Antifungal activities of the extracts were evaluated according to the microbroth dilution method in 96 well microdilution plates. The Minimum Inhibitory Concentration (MIC) and Minimum Fungicidal Concentration (MFC) based on counting the number of fungal colonies (CFU) were evaluated for each of *Allium ascalonicum*, *Marticaria*

chamomilla and *Stachys lavandulifolia* extracts and were compared with the control group.

Results: MICs of *Allium ascalonicum*, *Marticaria chamomilla* and *Stachys lavandulifolia* were respectively 0.31, 3.75 and 15.13 mg/ml, their MIC50s were respectively 0.93, 10.59 and 41.32 mg/ml, their MIC90s were respectively 8.65, 16.88 and 60.55 mg/ml, and their MFCs were respectively 20, 20 and 65 mg/ml.

Conclusion: The results indicate that all three extracts are effective, but *Allium ascalonicum* possesses the highest antifungal activity on *Candida albicans*. If clinical trials support these findings, this plant may represent a new antifungal agent for control of *Candida albicans*.

Keywords: Candida, *Allium ascalonicum*, *Marticaria chamomilla* and *Stachys lavandulifolia* HN10108280887

Effect of celery seed extract on blood glucose and serum lipid profile in streptozotocin-induced diabetic rats

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Objectives: *Apium graveolens* (celery), is a plant species of the Apiaceae family. This study investigated the effects of hexanic extract of the celery seed on blood glucose, lipids and liver enzymes in diabetic male Wistar rats.

Materials and Methods: 35 male Wistar rats were divided into 5 groups (one normal and four diabetic groups). Streptozotocin (80 mg/kg) was administered intraperitoneally (i.p.) to induce diabetes. The effects of hexanic extract of celery seed (100 and 200 mg/kg, one injection per two days) was studied in comparison with glibenclamide as a positive control. Blood samples

were collected from eye orbital plexus on days 1, 18 and 33 and blood factor levels were determined by biochemical analysis. Finally, the histopathological changes in pancreas tissues were evaluated.

Results: Celery seed extract significantly decreased the serum glucose levels and higher dose of celery seed extract could improve the lipid profile in diabetic rats compared to negative control ($p < 0.001$). The concentration of ALT in serums of extract groups was significantly less than the diabetic negative control group ($p < 0.0001$), whereas AST level decreased only in the 200 mg/kg extract group compared to the diabetic negative control group ($p < 0.0001$). Also histopathological reports on pancreas tissues (islets of Langerhans) indicated less necrotic and degenerative injuries in celery seed extract groups compared to control diabetic rats.

Conclusion: Celery seed extract could significantly decrease the blood glucose level and improved the lipid profile in diabetic rats and should be considered as an antidiabetic and antihyperlipidemic agent in future clinical trials.

Keywords: Blood glucose, Celery seed, Diabetes mellitus, Lipid profile, Rat

HN10108000815

Evaluation of the effects of complementary medicine on reaching global standards of caesarean section in Iran

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Objectives: Fear of labor pain is one of the most important reasons for women's reluctance to choose natural birth. Misconceptions about childbirth and low awareness about different methods of pain relief have led to women's preference for caesarean section. According to statistics, rate of C-section in Iran is three times

higher than the global standards. Therefore, the present study was performed to evaluate the role of complementary medicine in reaching C-section global standards.

Materials and Methods: In this review article, we searched through Cochrane Library, PubMed, Google Scholar, SID, IranMedex, IranDoc and Magiran databases; additionally, the archives of library journals were reviewed.

Conclusion: After evaluating the literature, it was revealed that use of complementary medicine such as massage therapy and applying pressure on certain organs (e.g., heart, spleen, bladder, gall bladder, liver, colon and stomach) can lead to a reduction in labor pain, mothers' demand for analgesics, duration of labor, use of oxytocin, length of hospital stay and prevalence of C-section. Also, application of complementary medicine not only had no interference with childbirth, but also helped and accelerated the process. Therefore, complementary medicine is recommended during labor, considering its benefits, lack of side-effects and low cost. Complementary medicine can considerably promote mothers' health and lower the rate of C-section to the global level (15-25%). Therefore, it is suggested to apply complementary medicine as a pain relief strategy during labor.

Keywords: Caesarean section, Complementary medicine, Labor pain

HN10105850457

Perceived barriers against the use of complementary and alternative medicine in Iran and other countries

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Objectives: Complementary and alternative medicine (CAM) is more commonly used in the Asian community compared to other countries. Different factors are involved in the refusal to

use CAM around the world. This study aimed to determine the perceived barriers against the practice of CAM in Iran and other countries.

Materials and Methods: This systematic review was performed via searching in databases such as PubMed, ProQuest, Ovid, Google Scholar, Medlib, Magiran and SID. Prepared checklists were used to evaluate the related studies, and 20 articles published during 2002-2015 in Iran were investigated in this study.

Results: In European and American countries, the main problems in the use of CAM were inadequate information of patients and recommendations by medical experts, and lack of required knowledge and skills. In Asian countries, the main barriers were low patient satisfaction, inaccessibility (i.e., transportation or physical problems), insufficient accommodation (i.e., communication problems) and high treatment costs (i.e., financial or insurance problems). Other problems were lack of proper child care, refusal of health care services, and lack of enough time for receiving CAM treatments. In Iran, the greatest barriers against the practice of CAM were classified into 4 categories of organizational factors, management issues, equipment shortage, environmental factors and lack of adequate medical personnel.

Conclusion: According to the results of this study, frequency of CAM practice is variable in different parts of the world depending on racial and ethnic diversities.

Keywords: Barriers, Complementary medicine, Alternative medicine, Iran, World

HN10103920260

Chemotherapeutic efficacy of hydroalcoholic extracts of *Berberis integerrima* in colon cancer via modulation of xenobiotic-metabolizing enzymes and β -catenin expression in experimental rats

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Objectives: In recent years, particular attention has been paid to the treatment of different diseases, using natural products. For the first time, the present study was designed to screen the anti-cancer activity of hydroalcoholic extracts of *Berberis integerrima* (barberry) in rats with 1, 2-dimethylhydrazine (DMH)-induced colon cancer.

Materials and Methods: Male Wistar rats were divided into five groups: the negative control group without DMH, the control group receiving DMH (20 mg/kg bw) and two chemotherapeutic groups receiving DMH for four months following the use of *B. integerrima* extracts (50 and 100 mg/kg bw, respectively). The rats in group 5 as the positive control group were given DMH injections after 10 mg/kg bw injections of 5FU. Chemotherapeutic activity was assessed by measuring detoxifying enzymes including glutathione S-transferase (GST) and cytochrome P₄₅₀ (CYP₄₅₀). Also, colonic β -catenin proteins in colon tissues were evaluated via histopathological analysis.

Results: Our findings demonstrated that the administration of barberry extracts at two doses surprisingly optimized the activity and protein levels of CYP₄₅₀ and GST ($p < 0.05$) and modulated the elevation of β -catenin level, induced by DMH. Moreover, histopathological changes in rats receiving DMH significantly improved in the chemotherapeutic groups.

Conclusion: Based on the findings, barberry extracts may be promising agents for the treatment of colon cancer.

Keywords: Carcinogenesis, *Berberis integerrima*, β -catenin, Detoxifying enzymes, DMH

HN10107120644

The grounded theory: a suitable approach for the evaluation of

traditional medicine

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Despite the growing trend of research about traditional medicine, lack of appropriate research methods in this field has restricted the remarkable capability of traditional medicine only to achieve pharmaceutical active ingredients. Most of these studies evaluating different diseases from the perspective of traditional medicine are discontinued at data collection, and final results are obtained merely through the juxtaposition of the collected data. In most cases, this is due to the lack of knowledge in the studied field on behalf of researchers, which discourages them from the analysis of contradictory and ambiguous findings. In this paper, we aimed to emphasize the necessity of revising the available research methods in the field of traditional medicine, while introducing the principles of the Grounded Theory. The Grounded Theory is a popular qualitative research strategy and could be effectively used for evaluating the resources of traditional medicine. In this study, we present an example of the functionality of this method, while explaining the process of using it. To perform open coding, we used document analysis, and two stages of axial and selective coding were performed in order to categorize the studied factors and explore the associations between different components and dimensions. Use of the Grounded Theory could be beneficial in the arena of medical theorization and contribute medical authorities in elevating the stance of traditional medicine using philosophical and logical measures.

Keywords: Data-based theorizing, Qualitative study, Traditional medicine

HN10105140542

Effects of local heat therapy on pain in the posterior portion of the chest in patients with acute coronary syndrome

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Objectives: Chest pain is the most common complaint of patients with acute coronary syndrome. Heat therapy is one of the non-drug methods for pain relief in these patients. The purpose of this study was to determine the effects of local heat therapy on pain severity in the posterior portion of the chest in patients with acute coronary syndrome.

Materials and Methods: In total, 50 patients with a definite diagnosis of acute coronary syndrome were randomly divided into placebo and test groups. Heat therapy was applied at 50 °C in the test group and at 37 °C in the placebo group on the posterior portion of the chest for 23 minutes (four times). Duration and frequency of pain, as well as the need for analgesics, were measured and recorded before and after the intervention. For data analysis, descriptive and inferential tests were performed, using SPSS.

Results: The frequency, intensity and duration of pain in the placebo group were not significantly different before and after the intervention. However, in the intervention group, there was a significant decline after the intervention, compared to the pre-intervention period ($p < 0.05$). There was no significant difference between the groups in terms of the need for analgesics before and after the intervention; however, in the placebo group, the need for analgesics increased.

Conclusion: According to the results, this method can be applied as a complementary treatment option for pain relief.

Keywords: Acute coronary syndrome, Pain in the posterior portion of the chest, Local heat therapy

HN10107710741

A review of expert consensus among traditional Iranian medicine specialists on temperament determination

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Objectives: The concept of temperament is one of the most significant elements of health, disease and medical health care in traditional Iranian medicine. Indices of temperament have not been qualitatively discussed in traditional medicine resources. Moreover, methods of analysis, priority and the status of these indices in determining temperament have not been specified. Access to documents on the status of temperament determination by experts is the first step to standardize these indices in Iranian medical diagnosis. The purpose of this descriptive study was to describe expert agreement in determining temperament.

Materials and Methods: Three specialists in traditional medicine determined the temperament of 123 healthy volunteers. A consensus was established by the experts regarding temperament determination.

Results: The mean age of the participants was 23 years. Overall, 58 and 65 men and women were enrolled in the study, respectively. Intra class correlation (ICC) among specialists was 0.62 (0.53-0.7) in determining hot/cold temperaments and 0.64 (0.56-0.72) in determining wet/dry temperaments. Kappa coefficient (k) and Spearman's correlation (r) among the specialists in determining hot/cold temperaments were 0.41-0.6 and 0.58-0.67, respectively. The corresponding values in determining dry/wet temperaments were 0.49-0.61 and 0.58-0.69, respectively.

Conclusion: According to the findings, consensus among specialists in determining temperament was at a moderate level. The present research was the first conducted study on the evaluation of expert consensus among traditional medicine specialists in determining

temperament. Each specialist applied a specific method for this purpose. In order to constantly promote diagnostic and educational systems in traditional Iranian medicine, establishing a consensus on diagnosis (particularly temperament determination) is essential. It is recommended that future research determine the status of each factor involved in temperament in clinical experiments. Moreover, further descriptive studies should be conducted to introduce a standard protocol for determining temperament. It is hoped that consensus among specialists be promoted via conducting the aforementioned studies.

Keywords: Reliability, Specialist, Temperament, Traditional Iranian medicine

HN10102590525

The effect of acupuncture on constipation in patients with chronic renal failure undergoing hemodialysis

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Objectives: Constipation is one of the most common digestive problems of dialysis patients. Constipation has negative impacts on the quality of life in these patients. Non-drug therapy compared to drug therapy has additional benefits. This study investigates the effect of acupuncture on constipation of dialysis patients.

Materials and Methods: The study was a double-blind randomized clinical trial. The sample consisted of 60 patients undergoing treatment for constipation. Random allocation divided the patients into two experimental and control groups. The experimental group for four weeks, three times a week and each time one minute underwent an acupuncture at acupuncture points during their dialysis. For the control group acupuncture only conducted on sham points. The number of bowel movements was measured before and after the intervention.

Results: The mean frequency of stool before

the intervention in the test group was $2.330.95 \pm$ and for the control group was $2.401.03 \pm$. There were not any significant differences between these two groups ($p=0.84$). In the fourth week, mean stool frequency of the experimental group was significantly more than the control group ($p=0.007$) as the mean frequency of stool in the experimental group was $4.031.80 \pm$ and for control was $2.761.54 \pm$.

Conclusion: Acupressure has positive effects on the number of stools in dialysis patients with constipation. Therefore, we can suggest this method as a complementary treatment in for improving the symptoms of these patients.

Keywords: Acupressure, Constipation, Chronic renal failure, Hemodialysis

HN10108070853

Effects of resistance training and supplementation with aqueous extract of melissa officinalis on myeloperoxidase and DNA damage in male swimmers

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Objectives: Nowadays, resistance training is used as an effective method to improve muscle strength, endurance and various components of physical fitness. However, some reports suggest that resistance training increases the production of free radicals, which trigger unstable chain reactions with cellular structures. Increased amount of free radicals in proportion to the antioxidant defense system leads to oxidative stress, which is the root of several human diseases. Oxidative stress causes DNA damage, and in case of extreme stress, it paralyzes the natural defense mechanism of the body. Short-term and long-term use of natural, edible complementary antioxidant ingredients could reduce the adverse effects of oxidative stress caused by extreme sports, such as resistance training. Evidence suggests that supplementation with these compounds could boost athletic performance, enhance antioxidant defense mechanisms and reduce the oxidative damage caused by exercise. *Melissa officinalis* is

an aromatic plant from the family of Lamiaceae and is rich in antioxidant components. Antioxidant properties of this herb are measured by common methods and in vitro. This study aimed to investigate the effects of exercise and supplementation with *Melissa officinalis* on myeloperoxidase and DNA damage during a period of resistance training in male swimmers in Arak city, Iran.

Materials and Methods: This study was conducted on male swimmers within the age range of 15-19 years divided into four groups. Blood samples were obtained from all the subjects before and after intervention. Subjects in the experimental group received 1.5 g of brewed *Melissa officinalis* daily for one month during swimming resistance training.

Results: In this study, myeloperoxidase and DNA damage had no significant difference after supplementation with *Melissa officinalis* during resistance training.

Conclusion: According to the results of this study, supplementation with *Melissa officinalis* has no significant effects on myeloperoxidase and DNA damage caused by extreme resistance training in athletes.

Keywords: Swimming, Resistance exercises, Oxidative stress, Lemon balm

HN10104800399

Effects of acupotomy and electro-acupuncture on the mRNA expression of central PPT in rats with third lumbar vertebral transverse process syndrome

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Objectives: Production of PPT-A by PPT mRNA triggers the generation of neuro-peptides, such as substance P, which play a pivotal role in pain modulation. Changes in the transcription of PPT mRNA could affect these neuro-peptides and

result in pain relief.

Materials and Methods: This study was conducted on 42 SD rats divided into 4 groups of normal, model, electro-acupuncture and acupotomy. Normal subjects received no interventions, and third lumbar vertebral transverse process syndrome was induced in other animals. In addition, rats in the model group received no treatment, while electro-acupuncture and acupotomy groups were treated with electro-acupuncture and acupotomy, respectively. Images of prepared slices were analyzed to study the mRNA expression of PPT.

Results: In this study, positive cells of electro-acupuncture and acupotomy groups were fewer than those of the model subjects. Moreover, there was no significant difference between electro-acupuncture and acupotomy groups ($p > 0.05$) on day 28. However, there was a significant difference in the rats surviving for 56 days ($p < 0.05$).

Conclusion: According to the results of this study, acupotomy and electro-acupuncture could significantly reduce the elevation in the level of PPT mRNA. Furthermore, effects of acupotomy were more significant after 56 days compared to electro-acupuncture ($p < 0.05$).

Keywords: Electro acupuncture, Acupotomy

HN10104670915

Etiology of sexual dysfunction in women in the perspective of Iranian traditional medicine

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Objectives: Sexual dysfunction is a common problem among women at the age of productivity. This condition is defined as the lack or loss of sexual desire, arousal and orgasm, feeling of pain during intercourse and absence of sexual pleasure. Sexual dysfunction is a major cause of psychological and physical disorders, as well as

family disputes. Identification of the main causes of sexual dysfunction among women from the perspective of Iranian scholars could contribute to the prevention and treatment of this problem.

Materials and Methods: In this study, reliable references in relation to the topic of sexual dysfunction were reviewed in the literature of Iranian Traditional Medicine (ITM).

Results: In the references of ITM, etiologies and treatments of sexual dysfunction are discussed in distinctive chapters, focusing on physical and psychological aspects of this problem. According to this literature, efficient sexual function could be achieved through factors such as healthy sexual organs, normal psyche and humors, and "Reeh" (normal bloating). Quantity and quality of these factors are variable depending on the function of major body organs (e.g., heart, liver and brain). In the viewpoint of Iranian scholars, sexual dysfunction mostly occurs due to the lack of interest or desire in sexual activity, as well as the dysfunction of sexual organs.

Conclusion: According to the holistic perspective of ITM, utilization of preventive and therapeutic measures recommended for sexual dysfunction is necessary to overcome this problem. Although some of the causes of sexual dysfunction are compatible between modern medicine and ITM, investigation of the traditional, behavioral strategies regarding the association between the sexual organs and other systems of the body is paramount. These arguments could be beneficial in the prevention of sexual dysfunction among women.

Keywords: Sexual Dysfunction, Women, Traditional Medicine, Libido

HN10104670916

The effect of hydroalcoholic extract of cinnamon on the symptoms of morphine withdrawal syndrome in mice

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Objectives: Addiction to opiates such as morphine is one of the most important social problems. Long-term consumption of opiates leads to physical and psychological dependence which makes it very difficult to quit. In Iranian traditional books, cinnamon was suggested to aid with opiate withdrawal. In this study, we tried to assess its effect on morphine withdrawal symptoms.

Materials and Methods: In this study, 50 little white mice were addicted to morphine according to the standards. To 40 mice 200 mg/kg, 100mg/kg and 50 mg/kg of hydroalcoholic extract of cinnamon were subcutaneously injected and to 10 mice, clonidine 0.3 mg/kg was subcutaneously injected one hour before the last dose of morphine. Two hours after the last morphine injection, intraperitoneal of 2 mg/kg of naloxone was injected to all mice and they were observed by a person and a camera for 30 minutes to detect morphine withdrawal symptoms.

Results: The results of this study showed that the effect of hydroalcoholic extract of cinnamon on three morphine withdrawal symptoms, i.e., stretching, jumping and urination is dose dependent. Moreover, the interventional groups with cinnamon showed no significant difference between themselves and the control group in terms of itching and the number of droppings ($p=0.99$).

Conclusion: According to the obtained statistical results, more studies are required to detect the possible mechanism of the effect of hydroalcoholic extracts of cinnamon on mice with morphine withdrawal symptoms.

Keywords: Hydroalcoholic extracts of cinnamon, Mice, Morphine

HN10108911019

Comparison of the anti-asthmatic mechanisms of medicinal herbs

in the perspective of modern and traditional medicine

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Objectives: Asthma is a chronic inflammatory disease of the airways, associated with increased airway responsiveness and reversible airflow obstruction. Approximately 300 million people are known to suffer from asthma across the world. Recently, there has been a growing tendency towards the use of herbal medicines due to the limited side effects and presence of various beneficial compounds. This study aimed to evaluate and compare the effective anti-asthmatic mechanisms of different medicinal plants in the perspective of modern and traditional medicine.

Materials and Methods: In this study, literature search was performed via reliable herbal medicine references, such as PDR, WHO and Commission E, and effective herbs in the treatment of asthma, which were distributed in Iran, were identified. Afterwards, the anti-asthmatic mechanisms of these medicinal plants were extracted from the available references of traditional medicine.

Results: In total, 48 medicinal plants were selected and divided into three groups of edible, medicinal and toxic. In addition, anti-asthmatic mechanisms of these herbs were divided into two categories of anti-inflammatory and bronchodilator based on the references of modern medicine. Among these herbs, 15 were found to function through both these mechanisms. Based on the references of traditional medicine, anti-asthmatic herbs were divided into five groups of antispasmodic, diuretic, respiratory tract disinfectant and laxative drugs, and 14 herbs were observed to exert all these effects.

Conclusion: The medicinal herbs with the most significant anti-asthmatic properties in the references of modern and traditional medicine were introduced for further research and investigation of their clinical effects on the patients diagnosed with asthma.

Keywords: Asthma, Herb, Modern medicine

HN10104460547

Prevention and treatment of constipation in children from the perspective of traditional medicine

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Objectives: Constipation is one of the most common problems of children and it is one of the most common reasons for children to refer to a doctor. Numerous reasons for this disease have been mentioned in the traditional medicine. It is believed that this disease is mostly due to the lack of compliance with the six essential principles for maintaining health.

Materials and Methods: This descriptive-review based study evaluated the reliable books of traditional medicine, contexts and concepts related to this subject. Then, the data were collected and categorized.

Results: From the perspective of Iranian traditional medicine, the first step for treating this disease is changing the life style. Moreover, training and adjusting the six necessary principles, especially in children, to prevent constipation are of utmost importance. In the next steps, using medications is recommended for treating this disease.

Conclusion: A few clinical trials have been done concerning the effects of herbal medicines on constipation in children. Therefore, taking preventive and curative measures and using recommendations of traditional medicine can lead to providing more efficient solutions with lower costs for constipation in children.

Keywords: Children, Constipation, Iranian traditional medicine, Six necessary principles

HN10102920769

Evaluation of the effects of beet ethanol extract on the learning ability and spatial memory of rats

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Objectives: Reduced learning ability and memory are caused by different factors, and ageing in particular has a significant impact on the process of human life. There are inadequate effective mechanisms for the prevention and treatment of these disorders. This study aimed to investigate the effects of the ethanol extract of the roots and leaves of beets on the spatial memory of rats using the Morris water maze.

Materials and Methods: This study was conducted on adult male Wistar rats (weight: 200-250 g) selected and divided into groups of eight. During 25 days, animals received normal saline or root extract at doses of 250, 500 and 1000 mg/kg. In addition, the extract of beet leaves at doses of 50, 100 and 200 mg/kg was administered via intraperitoneal injections. Data analysis was performed using one-way ANOVA and Tukey's test.

Results: In comparison to the control group, ethanol extract of beet root significantly improved the spatial memory of rats at doses of 500 and 1000 mg/kg. Moreover, 200 mg/kg of the leaves' ethanol extract had the same effect on the spatial memory of the studied animals.

Conclusion: According to the results of this study, ethanol extract of the roots and leaves of beets could enhance spatial memory in rats due to the presence of phenolic compounds, antioxidant properties, and other components such as phosphorus, iron, zinc, folic acid and ascorbic acid.

Keywords: Beet extract, Spatial memory, Rats

HN10107810788

Assessment of the impact of massaging with aromatic oil on relieving itchy skin in the patients undergoing dialysis

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Objectives: One of the common complaints of patients with chronic renal failure undergoing dialysis is itching. Itching is irritating for the patients and can heavily affect the quality of life for these patients. The usual treatments have approximately failed and kidney transplant is the final cure. Complementary medicine has been recently used as an alternative method for relieving itching. Therefore, this study aims to investigate the effect of massaging with and without aromatic oil for relieving itching.

Materials and Methods: This clinical trial was conducted on dialysis patients under the supervision of Torbat Heidarieh University of Medical Sciences. The samples of this study consisted of 45 dialysis patients undergoing treatment at the University Medical Sciences of Torbat Heidarieh. The patients were randomly divided into two groups of control (without scented massage oil) and intervention (massage with aromatic oils). Patients underwent 3-4 hours of hemodialysis three times a week with acute itching. The participants were randomly divided into two groups of control and test. The test group received 10 sessions of massage with aromatic oil and 10 sessions of massage without aromatic oil. The order of receiving massages was not the same in the two groups. In order to cleanse the skin, there was a week interval between periods of intervention. Massaging was conducted on the arms and wrists without fistula for 10 minutes. Sweet almond oil was used for non-aromatic massaging and peppermint and tea tree oil was used for aromatic massaging.

Results: The results showed that the patients were similar in terms of age, gender, underlying diseases, severity of dry skin and physiological parameters (however, dialysis duration was slightly different). This study demonstrated that massage with or without aromatic oil can significantly relieve itching after the first and second stages. There were no significant differences between the two modalities.

Conclusion: Regardless of the type of massaging oil, application of these oils can relieve itching in patients undergoing hemodialysis.

Keywords: Hemodialysis, Massaging with

aromatic oils, Oil massage

HN10107810797

Evaluation of complementary medicine in the viewpoint of students at Torbat-Heidarieh university of medical sciences, Iran

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Objectives: Complementary medicine is commonly practiced in different populations. However, few studies have evaluated the viewpoint of medical students towards this field of medicine. This study aimed to assess complementary medicine from the perspective of students at Torbat Heidarieh University of Medical Sciences, Iran.

Materials and Methods: This cross-sectional study was conducted on 120 junior and senior medical students at Torbat Heidarieh University of Medical Sciences, Iran in 2012. Data were collected using questionnaires about the viewpoint of students towards different methods of complementary medicine. Data analysis was performed using statistical tests.

Results: In this study, 58% of the subjects were junior students, and prayer therapy accounted for the most positive attitude (7%). Treatment with medicinal herbs accounted for a moderate attitude (74.5%), and the most negative attitude was associated with leech therapy (84.5%). Moreover, positive attitude towards acupuncture was 68.2%. Negative attitude of senior and junior students towards herbal medicine was 32.5% and 8.6%, respectively. Also, attitude of these students towards leech therapy was 92.6% and 78.6%, while it was 87.2% and 65.2% towards cupping, respectively, which was indicative of a significant increase.

Conclusion: According to the results

of this study, majority of students had a moderately positive attitude towards alternative and complementary methods, while the attitude was more negative among senior students. Therefore, it is recommended that training courses be planned for medical student to enhance their knowledge about alternative medicine.

Keywords: Alternative medicine, Complementary medicine, Students, Viewpoint

HN10103470184

Effects of mirror therapy on phantom pain in patients with bilateral amputations admitted to the veterans foundation of Qazvin, Iran

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Objectives: The purpose of this study was to determine the effects of mirror therapy on patients with unilateral amputations and phantom pain in the upper and lower limbs, referring to the Foundation of Martyrs and Veterans Affairs of Qazvin, Iran in 2013.

Materials and Methods: In this study, 38 patients with unilateral amputations were allocated to the intervention and control groups (19 cases each). The treatment plan for the intervention group included mirror therapy three days a week (30 min per day) for a period of one month. On the other hand, patients in the control group were asked to look directly at the injured member under the same circumstances as the intervention group. Severity, duration and frequency of phantom pain were evaluated before and after the treatment in both groups. The mean values were analyzed, using t-test.

Results: Phantom pain scores in patients with upper limb amputations were 7.5 and 3.25 before and after the intervention, respectively. In patients with lower limb amputations, the scores were 6.4 and 2 before and after the intervention, respectively; the difference between the groups was statistically significant ($p < 0.05$). The average duration of phantom pain was 6 and 4 min in patients with upper limb amputations and 5.7 and 3.2 in patients with lower limb amputations before and after the intervention, respectively; the observed difference was statistically significant ($p < 0.05$). The average frequency of phantom pain was 5.5 and 4.75 in patients with upper limb amputations and 4.1 and 2.8 in patients with lower limb amputations before and after the intervention, respectively. The observed difference was not significant in patients with upper limb amputations ($p > 0.05$), whereas a significant difference was observed in subjects with lower limb amputations ($p < 0.05$).

Conclusion: Mirror therapy was effective in reducing the severity and duration of phantom pain in patients with unilateral upper and lower limb amputations. Although mirror therapy was effective in reducing the frequency of phantom pain in patients with unilateral lower limb amputations, it could not reduce the frequency of phantom pain in patients with upper unilateral amputations.

Keywords: Phantom pain, Mirror therapy, Unilateral limb amputation

HN10103040324

A review study on the inhibitory effects of Iranian herbal medicines against in vitro replication of herpes simplex virus

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Objectives: Iran has rich herbal flora with

extensive ecological diversity. So far, no systematic reviews have been conducted on Iranian medicinal plants regarding their phytochemistry, bioactivity and in vitro activity against the replication of herpes simplex virus (HSV). This article aimed to review and summarize the published results on this subject as to offer recommendations for future researches.

Materials and Methods: In this systematic review, we searched for articles published in English (via PubMed, ScienceDirect, EMBASE, Scopus, ProQuest, Google Scholar and Cochrane Library) and Persian (via SID, IranMedex and Magiran), from 1966 to October 2014. In-vitro studies without the measurement of CC_{50} , IC_{50} , or EC_{50} were excluded from this review.

Results: Only 42 published reports were identified on the evaluation of Iranian herbs with inhibitory effects against HSV replication *in vitro*. In total, 17 articles were selected, in which 23 medicinal plants were subjected to crude extraction. Review of data indicated that some herbal extracts such as *Hyssopus officinalis* methanolic extract, *Melissa officinalis* aqueous extract, *Quercus persica* L hydro-alcoholic extract and *Securigera securidaca* methanol seed extract were highly effective on HSV *in vitro* (selective indices: 234, 877, >778 and 250, respectively).

Conclusion: This systematic review covered the published results of researches on Iranian medicinal plants and the corresponding isolated active phytochemicals. According to the results, comprehensive studies with advanced methodology are required as to discover effective anti-HSV agents obtained from the bioactive compounds isolated from these medicinal plants.

Keywords: Herpes simplex virus, Herbal medicine, Iran, In-vitro

HN10103040325

Anti-herpes simplex type-1 activity of crude ethanol extract and the correspond fractions of *Quercus brantii* acorn

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Objectives: Prevalence of drug-resistant strains of herpes simplex virus-1 (HSV-1) has increased recently. Therefore, new antiviral agents with inhibitory effects against HSV-1 infection need to be obtained from medicinal plants. This study aimed to compare the anti-HSV-1 activity of crude ethanol extract and the correspond fractions of *Quercus brantii* acorn in vitro.

Materials and Methods: In this research, crude ethanol extract of *Quercus brantii* was prepared and subjected to fractionation with different polarity. N-hexane, chloroform, n-butanol and other aqueous fractions were obtained from the crude extract. Anti-HSV-1 activity of the crude extract and the correspond fractions was evaluated on baby hamster kidney (BHK) cell lines, using 3-[4, 5-Dimethylthiazol-2-yl]-2, 5-Diphenyltetrazolium Bromide (MTT) assay. Moreover, inhibitory effects of the plant materials during the adsorption and/or post-adsorption stages of HSV-1 replication cycle were investigated. Regression analysis was used to determine inhibitory concentration 50% (IC_{50}) and 50% cytotoxicity concentration (CC_{50}), from which selective index (SI) was calculated.

Results: In this study, chloroform fraction and crude extract had the most significant effects against HSV-1 with SI of 252.5 and 48.4, respectively. Other aqueous fractions exhibited limited activity against this virus with SI of 5.6. Moreover, n-hexane, n-butanol and chloroform fractions inhibited HSV-1 replication during the post-adsorption stage ($p < 0.001$).

Conclusion: According to the results of this study, the chloroform fraction of *Quercus brantii* fruit exerts significant inhibitory effects against HSV-1 replication and could be used as an efficient anti-HSV-1 agent.

Keywords: Antiviral activity, *Quercus brantii*, Herpes simplex virus, Acorn

HN10103470183

Investigating the effect of desensitization method with eye movements

and reprocessing on dressing pain anxiety of burn patients

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Objectives: Burning is one of those injuries that make severe pains in patients, and the procedure of treatment causes anxiety for patients. This study aims to determine the impact of desensitization method with eye movements and reprocessing on the anxiety arising from pain of bandaging in burns patients.

Materials and Methods: This was a clinical trial study conducted on burn patients in Shahid Rajaei Hospital of Qazvin in 2014-15. The participants were chosen through convenience sampling. All the patients were randomly divided into two groups of intervention and control, each consisting of 30 patients. The instrument was a standard questionnaire of burning pain anxiety. Eye movement with desensitization method and reprocessing (Eye Movement with desensitization and Reprocessing: EMDR) were conducted on the intervention group for 45 to 90 minutes. The obtained data were analyzed performing independent t-test, chi-square test and descriptive analysis.

Results: Mean score of anxiety in the intervention group before the intervention was 51.07 ± 4.81 . After conducting the intervention, the mean anxiety score of the patients was 38.40 ± 2.05 , showing a significant difference as a result of the intervention ($p < 0.001$). The average scores of anxiety in the control group before and after the intervention were equal to 50.03 and 53.02, the difference between the two was statistically significant ($p < 0.001$).

Conclusion: The results of this study showed that the movement desensitization and reprocessing (EMDR) method can reduce the anxiety resulting from pain of burn patients during the treatment procedure. Using this treatment technique for burn patients will lead to the health improvement and assuaging their anxiety.

Keywords: Burn, Eye movement desensitization and reprocessing, Pain anxiety

HN10101150224

Use of medicinal plant compounds in the management of environmental pests

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Objectives: Various pests such as German cockroach (*Blattella germanica*) threaten the health of humans and the environment. German cockroach is regarded as a serious medical and economic threat. Research has shown that extracts from medicinal plants can be used to control these pests due to the low toxicity of these extracts for humans and wildlife and their short living periods in the environment.

Materials and Methods: Toxic respiratory effects of essential oils from *Allium sativum* and *Citrus reticulata* on developmental stages of German cockroaches were studied. Essential oils were extracted through water distillation by the Clevenger apparatus. The tests were carried out in plastic containers through soaking the filter paper in different amounts of oil. Mortality was recorded at 24 hours after the treatment.

Results: The study of respiratory toxicity showed that lethal concentrations (LC_{50}) of *Allium sativum* and *Citrus reticulata* in the first developmental stage were 0.77 and $50.43 \mu\text{L/L}$ of air, respectively. These values were 2.35 and $90.86 \mu\text{L/L}$ in the third stage and 3.50 and $120.71 \mu\text{L/L}$ in the fifth stage, respectively.

The corresponding values in male and female cockroaches were 2.27 and 87.13 µg/L and 4.44 and 135.13 µg/L, respectively.

Conclusion: The results of this study showed that in all stages of pest development, there is a positive correlation between the essence concentration and mortality rate of German cockroaches. Therefore, it is recommended to use the compounds extracted from these plants as alternatives to chemical pesticides for the management of cockroach populations.

Keywords: Medicinal herbs, Respiratory toxicity, Pest control

HN10102230489

Pharmacological effects of *Origanum vulgare* L.: From Iranian traditional medicine to modern phytotherapy

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Objectives: Iranian traditional medicine (ITM) originated 3000 years ago in Iran. New ITM-based herbal medicines enter the Iranian drug market every year for various complications. *O. vulgare* L., from the family of Apiaceae, is a medicinal herb which is commonly used due to broad spectrum of its therapeutic uses. This article provides an overview of the botanical description, pharmacological uses and phytochemical properties of *O. vulgare* L.

Materials and Methods: Medicinal effects of different parts of *O. vulgare* L. were determined using the ITM documents. Published scientific reports about the composition and pharmacological properties of this plant were retrieved through electronic search of Google Scholar, PubMed, Science direct, Scopus and SID from 1970 to 2015. In this article, all the aspects of this plant in ITM are reviewed and compared with those shown in the modern phytotherapy.

Results: *O. vulgare* L. is an aromatic perennial herb. Several studies have shown that *O. vulgare* L. (Oregano) primarily contains monoterpenoids

and monoterpenes; however, the concentrations of the specific compounds vary widely depending on the geographic location and other varying factors. Over 60 different compounds have been identified such as carvacrol and thymol, ranging from 0 over 80%, while less abundant compounds include p-cymene, γ-terpinene, caryophyllene, spathulenol, germacrene-D, β-fenchyl alcohol and δ-terpineol. In the myths of ITM, healers used oregano as an antiseptic, as well as a cure for stomach and respiratory ailments and as a palliative for sore throat. Oregano contains polyphenols, including numerous flavones, and in ITM it was used internally (as tea) or externally (as ointment) for treatment of disorders of the gastrointestinal and respiratory tracts, as well as nervous system.

Conclusion: This research has collected evidences that *O. vulgare* L. can potentially be used as a medicinal plant in disorders of the alimentary tract, as well as the respiratory and nervous systems, especially with phlegm-dominant symptoms.

Keywords: Iranian traditional medicine, *Origanum vulgare* L., Phytotherapy, Review

HN10105390404

The effect of asafetida on hormone levels of students with polycystic ovary syndrome

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Objectives: Polycystic ovary syndrome (POC) is the most common endocrine disorder accompanied with chronic anovulation which affects 4-6% of women in their reproductive age. Given the numerous adverse side effects of chemical drugs, we are looking for herbal medicines for treating this disease. In so doing,

Iranian traditional resources such as *The Canon* were searched for medicinal herbs for treating POC, including asafoetida.

Materials and Methods: This clinical trial was done on 30 female residing in dormitories of Jahrom Medical Sciences University. The participants were checked by a gynecologist, and their polycystic ovary syndrome was diagnosed using ultrasound. Then, they were divided into two groups of intervention and control. Hormonal tests were taken before and after intervention. The intervention group received 100 mg capsules of asafoetida twice a day, and the placebo group received 100 mg capsules of paraffin the same way for 90 days.

Results: The results showed that there were no statistically significant differences between the two groups in terms of demographic data ($p=0.24$) and hormonal levels before the intervention. Blood levels of hormones such as FSH, LH, DHAS, TSH were analyzed using Mann-Whitney U test before and after the intervention, in which there was no statistically significant differences after three months of intervention ($p=0.129, 0.684, 0.244$ and 0.272).

Conclusion: The results of this study demonstrated that the edible supplementation of asafoetida does not cause any changes in hormone levels in blood. Therefore, it has no impact on curing the disease, despite the common belief.

Keywords: Asafoetida, Hormone, Polycystic ovary syndrome

HN10105230380

Use of complementary and alternative medicine in pediatric patients with hepatic and gastrointestinal disorders

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Objectives: Use of complementary and alternative medicine is a growing phenomenon, especially in Middle Eastern countries. This study aimed to evaluate the prevalence, types and associated factors of the use of complementary and alternative medicine in children with hepatic and gastrointestinal disorders in Shiraz, Iran.

Materials and Methods: In this cross-sectional study, 210 parents of children, attending a pediatric gastroenterology and hepatology clinic, affiliated to Shiraz University of Medical Sciences, completed a self-administered questionnaire including their prior experience and factors associated with the use of complementary and alternative medicine.

Results: In total, 103 patients (49%) used complementary and alternative medicine in the course of their hepatic and gastrointestinal disorders. Also, 74 patients (71.8%) using complementary and alternative medicine selected herbal remedies. The increasing age of the infant significantly though slightly promoted the use of complementary and alternative medicine with an odds ratio of 1.06 per year of increased age ($p=0.037$). Patients with a positive experience of complementary and alternative medicine (62.1% vs. 40.2% of users and non-users, respectively, $p=0.040$) and those recommended on the use of complementary and alternative medicine by healthcare providers (24.3% vs. 6.6% of users and non-users, respectively, $p=0.001$) were significantly more likely to use complementary and alternative medicine, compared to others.

Conclusion: This study demonstrated the high prevalence of the use of complementary and alternative medicine (especially herbal remedies) in pediatric patients with hepatic and gastrointestinal disorders, which was independently and significantly associated with a previous positive experience of herbal remedies, recommendations by healthcare providers and the infant's increasing age.

Keywords: Complementary and alternative medicine, Hepatic and gastrointestinal disorders, Herbal medicine, Prevalence, Use

HN10108550982

Prevention and treatment of calcium oxalate kidney stones using Alhaji

herbal tea

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Objectives: Urolithiasis is regarded as the most common urinary system disorder, associated with significant side-effects, in addition to heavy treatment costs. According to the present study, Alhaji herbal tea has beneficial effects and should be considered as one of the most suitable methods for the prevention of kidney stone formation in susceptible individuals.

Materials and Methods: Fluid distribution in a saturated solution of calcium oxalate (CaC_2O_4), herbal tea and CaC_2O_4 -containing herbal tea was measured, using flame photometry technique. Via conductivity assessment, we were able to measure the electrical conductivity of calcium chloride solution (control) and the solution containing herbal tea during titration, using sodium oxalate solution ($\text{Na}_2\text{C}_2\text{O}_4$). In addition, the conductivity graph versus the consumed volume of $\text{Na}_2\text{C}_2\text{O}_4$ was drawn.

Results: The intensity of calcium distribution in herbal tea was significantly different from saturated CaC_2O_4 solution, and the equivalent point in the conductivity graph of herbal tea was observed in a much lower volume of $\text{Na}_2\text{C}_2\text{O}_4$, compared to the control solution.

Conclusion: The results of this study showed higher insolubility of CaC_2O_4 in the presence of herbal tea. According to the results, Alhaji herbal tea could easily prevent the formation of calcium oxalate kidney stones at high concentrations of calcium and oxalate ions. Therefore, it can be suggested that Alhaji herbal tea is more effective for the prevention of kidney stones rather than treatment.

Keywords: Alhaji tea, Kidney stone, Prevention, Treatment

HN10108620941

Foodstuffs for male infertility: perspective of traditional Persian medicine

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Objectives: Infertility is a global issue affecting many couples around the world. In any given year about 15 percent of couples are infertile, of whom half of the causes are attributed to males. Fertility in men requires normal functioning of the hypothalamus and pituitary gland in the brain and the testes. Iranian scholars have expressed extensive etiologies for male infertility which include: sexual dysfunction, disorders in semen making, etc... Due to the expressed prevention and treatment recommendations about infertility in Persian medicine resources, we have decided to confirm foodstuffs that have actual impact on male sexual dysfunction in Persian medicine.

Material and Methods: Resources of Traditional Persian Medicine and modern medicine with articles on "male infertility & sexual dysfunction" in the recent years from electronic databases such as PubMed and Magiran were reviewed.

Results: Several animal & human studies in modern medicine have been identified and confirmed as some of the recommended foodstuffs for "sexual dysfunction" in Persian Medicine. But, there are certain foodstuffs which we haven't found enough studies and evidence for, these consist of; hazelnuts, pistachios, chio nut, garden cress, spruce seeds, baby pigeons, basil, melon, mango, white mulberry, opium poppy, grass pea vin.

Conclusion: From the perspective of Persian medicine for Infertility, it is necessary to

improve male sexual dysfunction. Improving of sexual dysfunction was confirmed for some of animal & herbal materials that are presented in this study. Other foodstuffs need to be considered for further future clinical studies. It seems that by setting a healthy diet and using the mentioned foods, male fertility can be greatly reduced.

Keyword: Traditional; Medicine, Infertility, Sterility, Sexual dysfunction, Male

HN10106970721

Complementary and alternative therapies for post-cesarean pain

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Objectives: Inadequate pain control after cesarean section increases complications, infections and the cost of care. Due to complications and lack of adequate pain relievers, investigation of the use of complementary therapies is merited. Hence, the purpose of this research was the review of complementary and alternative therapies for post-caesarean pain relief.

Materials and Methods: Using the keywords "pain", "cesarean", "complementary medicine" and their Persian equivalents, articles in PubMed, Google Scholar, SID, Web of Science, and Science Direct were searched for articles published between 1995 and 2015. Finally, 30 studies meeting the inclusion criteria were selected. To be included studies had to be randomized controlled clinical trials for assessment of the efficacy of complementary medicines for post-cesarean pain.

Results: The results show that complementary methods that are used for post-cesarean pain include: foot reflexology, foot and hand reflexology, auriculotherapy, touch therapy, acupressure, acupuncture, music therapy, prayer, recitation of the holy Quran, Benson relaxation, reiki, transcutaneous electrical nerve stimulation

(TENS), and aromatherapy (Salvia officinalis essence, lavender essence). The results of most studies affirmed the effectiveness of these methods for pain reduction after cesarean section. Only one study was found that dealt with auriculotherapy and Benson relaxation; on the effects of reiki, two studies were found, but the results of the two studies were contradictory.

Conclusion: Most complementary methods in this study were effective in reducing post-cesarean section pain, thus these methods can be used for pain control after cesarean section. However, auriculotherapy, reiki and Benson relaxation needed further studies.

Keywords: Pain, Cesarean, Complementary medicine

HN10106760563

Providing an integrated model of conventional and traditional medicine

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Objectives: Providing an integrated model is the first step for paving the way for developing an integrated medicine. Basic integration patterns are usually developed within one school of medical. But this concept, in medical sciences, can be defined within two or more schools of medicine.

Materials and Methods: After searching for different kinds of integration patterns in reliable databases, in addition to determining the differences between the concepts of conventional and traditional medicine, we focused on strengths and weaknesses of each, and a new pattern of

integration was suggested afterwards.

Results: A variety of integration methods fit in a spectrum on the one end of which we have specialists' cooperation (without the integration of scientific topics) and on the other, integration of medical practices (combining the scientific content among medical schools). Nowadays, the best definition of an integrated medical school, is using the established methods of treatment in the field of traditional medicine in the framework of conventional medicine. But based on the fact that philosophical foundations of traditional Iranian medicine are different from those of the conventional medicine, this integration brings about philosophical and theological challenges for us as Muslims having an eastern culture. Since basic concepts of traditional medicine such as nature and temperament are understood differently in the conventional western medicine, due to the differences in ideology, anthropology and epistemology of the two cultures.

Conclusion: According to our results, the best integration pattern is to accept the topics and frameworks of Iranian traditional medicine and to add all the recorded methods and tools of conventional medicine and other traditional medicine schools in this framework.

Keywords: Conventional medicine, Integrated medicine, Iranian traditional medicine

HN10109201063

The effect of adding acupuncture to treatment with methylphenidate in attention deficit hyperactivity disorder in children and adolescents: a case series

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Objectives: Attention deficit hyperactivity disorder (ADHD) is a disorder with symptoms such as inattentiveness, hyperactivity and impulsiveness which can be found in 3-12%

of the children. Acupuncture is the process of inserting needles in the skin and underlying tissue in special places called acupoint, and it is considered to be an easy, cost-effective and safe treatment method as compared to the other common interventions. There are numerous articles published on the subject of acupuncture in treatment of ADHD all over the world, especially in China, but only some of them show a beneficial effect on ADHD.

Materials and Methods: This study was a report of our experience from treating ADHD with the help of acupuncture in five children and adolescents in the age group of 11 to 16 who were under constant and standard treatment with methylphenidate. There were 12 acupuncture sessions. The patients were evaluated with ADHD Rating Scale-IV test, and Continuous Performance test before the treatment and three weeks after it.

Results: There was a 23-72% decrease in the score of ADHD Rating Scale-IV Test in all the five patients as compared to before the treatment. In the Continuous Performance Test, four cases showed a decrease in the number of commission and omission errors as compared to before the treatment, which were 75-100% and 66-100%, respectively. Also, the increase in the correct answers and a reduction in response time was seen in two cases, which were 2.7-3.5% and 7.2-13.4%, respectively.

Conclusion: Based on our findings, it seems that acupuncture can be effective in children and adolescents with ADHD. Although, there needs to be more controlled evaluation about this subject with larger sample sizes in order to confirm our findings.

Keywords: Acupuncture, ADHD, Attention deficit hyperactivity disorder

HN10104650322

The effect of apple cider vinegar on striae gravidarum in women aged 20–35 years residing in Gonabad

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Objectives: Striae gravidarum occurs in 50–90% of pregnant women and will never completely disappear. Since, in terms of aesthetics it is a major concern for most women, this study aimed to investigate the effect of apple cider vinegar on striae gravidarum in 20–35 year old women residing in Gonabad

Materials and Methods: The present study was a clinical trial on a simple non-randomly selected sample consisting of 23 women with stretch marks (striae), referring to health centers in Gonabad. Apple cider vinegar was massaged into the right half striae twice a day for one month, and washed after air-drying; the left side of the abdomen was used as control. Data was collected using a demographic questionnaire, striae appearance change checklist and imaging camera, and analyzed using SPSS (ver. 20), descriptive statistics, paired t-test, and Wilcoxon test. $p < 0.05$ was considered significant.

Results: The findings show that, 56.6% of research units approved the treatment. Striae length and width averages in the control side, before and after intervention, were not significantly different ($p = 0.45$), but showed a significant difference in the right side ($p < 0.001$).

Conclusion: Topical application of apple cider vinegar can effectively reduce the striae size, therefore, it is recommended as a traditional, safe and non-invasive procedure, although further studies of longer duration in this field are necessary.

Keywords: Striae gravidarum, Pregnancy, Apple cider vinegar, Women

HN10104650323

The effect of foot reflexology on blood pressure in elderly patients with hypertension

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Objectives: Different methods can be used by nurses to control blood pressure and keep it in the normal range. The first non-drug treatment step is performing foot reflexology. Foot reflexology is a massaging method and an interesting branch of complementary medicine. The purpose of this research is determining the effects of foot reflexology on blood pressure in elderly patients with hypertension.

Materials and Methods: This study is a controlled clinical trial in which 52 elderly patients with hypertension seeking treatment in medical centers of Gonabad were entered. These patients were divided in simple non-random manner into two groups of intervention (26 samples) and control (26 samples). Foot reflexology was performed once for 30 minutes (15 minutes for each foot) in the intervention group. Data was gathered using demographic information questionnaire and physiological registration form. Then, data was analyzed using the SPSS (ver. 19) software, analysis of variance with repeated measures, independent t-test and linear regression. $p < 0.05$ was considered significant.

Results: According to the results of this study, even though the average systolic blood pressure had no statistically significant difference after intervention in either group ($p = 0.056$), it decreased more in the intervention group compared to the control group. Other physiological indices had no statistical significance either.

Conclusion: The results indicated that foot reflexology is effective in decreasing systolic blood pressure, but no significant change in diastolic pressure, breath, and pulse occurs. Therefore, it can be used as a complementary, non-invasive, and non-drug method in elderly patients with hypertension.

Keywords: Foot reflexology, Blood pressure, Elderly, Hypertension

HN10101930065

***Polypodium Vulgare* L.: A valuable cardioactive medicinal plant**

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Objectives: *Polypodium vulgare* L. (Polypodiaceae, Common name: Polypody, Persian name: Baspayak, Basfayaj) is a valuable medicinal plant in Iranian Traditional Medicine (ITM). Jorjani in his great masterpiece “Zakhire Kharazmshahi” mentioned the rhizomes of this plant as a cardioactive plant. Avicenna believes that polypodyacts is an exhilarant, as well as a potent expeller of black bile from heart and other body organs. In this article, we aim to review pharmacological studies supporting cardiac activities of this plant.

Materials and Methods: The most popular bibliographic databases were searched for pharmacological data on the cardiovascular activity of *Polypodium vulgare*.

Results: Pharmacological studies demonstrated that *Polypodium vulgare* has antioxidant, anti-inflammatory, hypotensive and antihypercholesterolemic effects. Interestingly, this plant has been reported to exert positive inotropic and chronotropic, as well as anti-arrhythmic effects in animal studies. Ecdysteroids, which are important phytochemicals occurring in this plant, have been shown to prevent myocardial ischemia. *Polypodium vulgare* also has antiatherosclerotic effects.

Conclusion: *Polypodium vulgare* is a valuable cardioactive plant, which can be the subject of further animal and clinical studies to enrich and expand our understanding of its cardiovascular efficacy.

Keywords: Cardiovascular effects, Iranian traditional medicine (ITM), *Polypodium vulgare* L

HN10102050070

The effect of *Arnebia euchroma* ointment on burn wound in rats

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Objectives: The Iranian traditional medicine literature has suggested the efficacy of *Arnebia euchroma* roots in healing burn wound. The present study aims to investigate the healing effect of *Arnebia euchroma* ointment 5% and 10% on burn wound in rats, as compared to silver sulfadiazine.

Materials and Methods: After obtaining approval of Ethics Committee, fifty rats were divided into 5 equal groups receiving the ointment base, *Arnebia euchroma* ointment (A5%, A10%), normal saline (NS) and silver sulfadiazine (SSD %). The mean of burn area, percentage of wound contraction, histological and bacteriological assessments in the injured area were determined during the study.

Results The mean area of wound on the 10th day were 10.2±2.3, 8.4±2.6, 12.4±2.5, 5.9±2.2 and 5.7±2 cm² for ointment base, NS, 1% SSD, and 5% and 10% A, respectively. Wound size was significantly lower in 10% A than 1% SSD and the control groups on the 10th day post-burn injury. On the 11th day, the percentage of wound contraction in 5% and 10% A was 53.9%±14.7% and 55.9±10.5%, which was more than 1% SSD (15.3±10.8%). The collagen fibers were well-formed and horizontally-oriented in 5% and 10% A groups, as compared to the other groups.

Conclusion *Arnebia euchroma* ointment was an effective treatment for healing burn wounds in comparison with SSD and can be regarded as an alternative topical treatment for burn wounds.

Keywords: *Arnebia euchroma*, Burns, Hochobeh, Silver sulfadiazine, Wound healing

HN10107820759

FG meditation as an objective and rational meditation style adaptable for stress management in contemporary

era

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Among different strategies, meditation is an effective, secure and cost-effective method, which not only decreases tension and stress, but also promotes mental health, concentration and self-awareness. Although meditation has a long history in human culture and various methods have been labeled as meditation, especially in Eastern countries, noble methods, which are adaptable to the objective and sensitive nature of modern man, are required. In this study, we aimed to introduce FG meditation as an innovative and effective strategy, free of the ideological attachments of other meditative methods. FG meditation is an abbreviation for Farshad's Geometric Meditation and is divided into two specific parts: Geometric Somatic-Breathing-Based Meditation and Geometric Introspective-Based Meditation. FG meditation is a simple and concrete strategy, based on powerful rational facts. FG meditation is performed via focusing attention on directions and organized geometric shapes through breathing, which superposes to different parts of the body. F.G. meditation is a novel multidisciplinary meditation style, based on the principles of mathematics, geometry, psychology, physiology, neurosciences, cognitive sciences and philosophy of mind through which one can reduce physical, emotional and mental stress.

Keywords: Geometric meditation, Ideological attachments, Self-awareness

HN10100490009

An investigation of the effects propolis on the recurrent oral aphthous ulcers

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Objectives: Stomatitis is a common, painful and unexplained aphthous in the oral cavity. However, no certain treatment has been found for this problem, and to reduce pain and the frequency of these aphtha, topical and systemic medications are prescribed, many of which may have adverse side effects. Propolis is one of the bee products, which is used as a treatment for mouth sores in some places. Propolis' anti-inflammatory, anti-microbial and regulatory effects on the immune system are well-known, but its effects on the frequency of recurrent aphthous stomatitis is unknown yet. The aim of this study is to evaluate the potential effect of this product on lowering the frequency of recurrent aphthous ulcers.

Materials and Methods: In this randomized clinical trial, 22 patients with minor aphthous ulcers participated. The patients were randomly divided into intervention and control groups. In the intervention group, the patients received 500 ml propolis capsules and in the control group, the patients received placebo on a daily basis. Patients were followed up every two weeks for at least six months to determine the frequency, the number and the size of the wound and the amount of pain.

Results: The number of relapses in the propolis group was less than the placebo group, which was statistically significant ($p < 0.05$). In addition, a significant decrease in the number and size of lesions, pain and recovery time was found in the propolis group ($p < 0.05$).

Keywords: Clinical trial, Propolis, Recurrent aphthous stomatitis, Relapse

HN10105170366

Effects of food products prepared based on traditional Iranian medicine recommendations on thrombocytosis: a case report

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Objectives: Thrombocytosis is defined as an increase in the number of platelets present in the blood. This can range from mild elevations to a platelet count greater than 1,000,000/ μ L. Thrombocytosis has been associated with increased thrombotic risk, leading to serious complications such as stroke and cerebral infarction. In addition to treatment strategies for different types of thrombocytosis, aspirin is prescribed to prevent clotting complications.

Case report: In this study, we present the case of a 47-year-old woman with a platelet count of 465,000/ μ L two years prior to the study. Although the patient was asymptomatic, to prevent possible complications, 80 mg/day of aspirin was prescribed. During the three-, three- and six-month follow-ups, the platelet count was 434,000, 415,000 and 429,000/ μ L, respectively. After the final evaluation, the prescribed aspirin reduced to 80 mg every other day. Following six months, blood platelet count was 510,000/ μ L. Since the final evaluation, the soup prepared based on traditional Iranian medicine recommendations was suggested to be included in the patient's diet for dinner. Aspirin was interrupted by the patient and after four weeks of soup intake, the patient's platelet count reduced to 427,000/ μ L. Also, after three more weeks of soup consumption, the platelet count reduced to 386,000/ μ L. Following the last evaluation, soup intake reduced to alternate nights. Within the next two months, the patient's last platelet count was 417000/ μ L.

Conclusion: Daily use of soup, prepared based on Traditional Iranian Medicine recommendations, could reduce the patient's platelet count. This decline is probably due to the synergy of bioactive components in the ingredients used in the recipe. Changes in blood platelet count with soup intake are comparable to aspirin.

Keywords: Diet, Thrombocytosis, Traditional Iranian medicine

HN10107800762

Comparison of the analgesic effects of chamomile extract and morphine on mice

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Objectives: Pain is an adverse outcome of different diseases, which lowers the tolerance of patients. Several chemical drugs are available to relieve pain, which could give rise to many side effects. Today, medical experts suggest herbal alternatives as effective pain-relieving agents. This study aimed to investigate the analgesic effects of chamomile based on the references of the Iranian traditional medicine.

Materials and Methods: This empirical intervention was conducted on 50 mice divided into five groups of 10, including the recipients of 100, 200 and 400 mg/kg of chamomile extract, control group (receiving normal saline) and recipients of morphine (5 mg/kg). After the intraperitoneal injection of the drug or herbal extract, level of pain was evaluated in the mice using a hot plate device (48°C) at 15, 30, 45, 60 and 75 minutes. Data analysis was performed using ANOVA and Tukey's test.

Results: In this study, recipients of chamomile extract could stay longer on the hot plate device, and this difference was significant compared to the control group ($p < 0.05$). Analgesic effects of chamomile extract were dose-dependent, and the most effective dose was 400 mg/kg ($p < 0.05$). In addition, the most significant analgesic effect among the study groups was observed in the recipients of morphine.

Conclusion: According to the results of this study, chamomile extract has remarkable analgesic effects, and complementary studies could lead us to the better exploitation of the effective compounds found in this medicinal herb.

Keywords: Chamomile, Hot plate, Morphine, Pain

HN10107700908

Effects of Calorie restriction on formalin-induced inflammation in animal models

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Objectives: Management of acute and chronic inflammation is a challenging process, and use of chemical anti-inflammatory drugs is associated with several side effects. In the perspective of the Iranian traditional medicine (ITM), there is a significant correlation between inflammation and “Imtila” (food and water accumulation in the body). Calorie restriction (CR) is defined as the reduction of food intake, which could reduce the risk of imtila and inflammation. This study aimed to investigate the effects of a 30% daily CR on the incidence of inflammation in rats in Iran.

Materials and Methods: This experimental study was conducted on 18 male rats (race: *Rattus rattus*) weighing between 220-270 g. After inducing inflammation through formalin injection to the paws of the animals, they were randomly divided into two groups of 9 using software and prescribed with normal diet (control group) and a similar diet with 30% CR (experimental group) for eight days. Changes in the paw volume were recorded twice per day in both groups by one researchers using standard plethysmometer. In addition, serum C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), erythrocyte and platelet counts, white blood cell count and hemoglobin levels were compared between the study groups.

Results: In this study, reduction of body weight and paw volume were more significant in the experimental group compared to the control group

($p < 0.001$ and $p = 0.001$, respectively). Moreover, decrease in the paw volume of the animals was more significant after day 3 of injection. Also, there were more CRP-positive rats (1 or 2+) in the control group compared to the CR group (33.3% vs. 11.1%). However, this difference was not considered to be significant ($p = 0.58$). On the other hand, mean of ESR was significantly higher in the control group compared to the CR group (29.00 ± 2.89 h vs. 14.00 ± 1.55 h, respectively) ($p = 0.001$). No significant difference was observed in other serum parameters between the two study groups.

Conclusion: According to the results of this study, regression of inflammation was more significant in the animals receiving 30% CR diet compared to the control subjects.

Keywords: Calorie restriction, Inflammation, Animal models, Traditional medicine, Iran

HN10102690148

The efficacy of pilates exercises and the use of vitamin-E on the premenstrual syndrome symptoms in non-athletic girls

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Objectives: Premenstrual syndrome is a group of physical, mental and behavioral changes that appear in the late luteal phase of the menstrual cycle leading to disruption in interpersonal relationships and normal activities. Given the lack of understanding on its etiology, various treatments have been proposed for this syndrome. This study aimed to determine the effect of Pilates exercises and the use of vitamin-E on the premenstrual syndrome (PMS) symptoms in non-athletic girls.

Materials and Methods: This semi-experimental study, was performed on 40 non-athletic female students, aged between 18 to 23 years, who were selected from Ayatollah Boroujerdi University by completion of the PMS screening questionnaire (Persian version). The students were randomly divided into four groups, i.e., Pilates, Pilates and vitamin-E, vitamin-E and control groups. The

exercises were performed for four weeks, three days a week and the students took a vitamin-E pill on a daily basis. The data were analyzed performing pre- and post-test ANOVA and dependent t-test.

Results: According to the obtained results, there were no significant differences among the four groups before the intervention. After one month of doing Pilates exercises and taking vitamin-E, there was a significant decrease in the severity of mood and physical disorders and its impact on people's lives in the intervention groups, as compared to the control group ($p \leq 0.05$).

Conclusion: In this study, Pilates exercises combined with vitamin E improved the symptoms of PMS in the subjects.

Keywords: Non-athlete, Pilates exercises, Premenstrual syndrome, Vitamin E

HN10100810786

The effect of hydro-alcoholic extract of *Plantago major* on cisplatin-induced renal toxicity in rats

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Objectives: The cause of a large category of acute renal failures is secondary as a result of using drugs. Cisplatin is one of the most effective anti-tumor drugs, but its use is limited due to renal toxicity. *Plantago major* is an annual plant belonging to the plantain family (Plantaginaceae). It has many therapeutic effects such as anti-inflammatory, analgesic, and antioxidant. It is used traditionally to treat demodicosis, infectious and respiratory diseases, and tumors. This study aimed to determine the effect of hydro-alcoholic extract of *Plantago*

major on cisplatin-induced renal toxicity in rats.

Materials and Methods: In this study, 60 male Wistar rats were equally divided into six groups including control group, cisplatin (7 mg/kg BW IP), vitamin E (100 mg/kg BW IP), and 70% hydro-alcoholic extract of *Plantago major* (300, 600, 1200 mg/kg BW PO) combined with cisplatin. For 21 days all rats in vitamin E and extract groups received vitamin E and extract of *Plantago major*, respectively. Cisplatin was injected on the sixth day. All rats were placed in metabolic cages and their 24-hour urine and blood samples were collected 1 and 5 days before and 3, 9, and 15 days after injection of cisplatin. Blood samples were collected 2, 6, and 12 days after cisplatin injection. To compare resulting biochemical parameters the mean results of 0 and 5 days (pre cisplatin injection days) were compared with 2 mean results of 8, 9 and 12 days. Mean concentration differences of serum urea, creatinine and potassium between days 0 and 5 and 8, 9, and 12 were determined.

Results: Cisplatin lead to a significant increase in serum urea and creatinine levels and insignificant increase in serum potassium level compared with the control group. Serum urea, creatinine, and potassium levels were significantly reduced in rats which received vitamin E and the *Plantago major* extract in various doses.

Conclusion: The results of our study show that vitamin E and *Plantago major* reduced the elevated serum levels of urea, creatinine and potassium probably due to antioxidant activity. Therefore, vitamin E and *Plantago major* have a protective role against cisplatin-induced renal toxicity.

Keywords: Cisplatin, *Plantago major*, Vitamin E, Renal failure

HN10105830452

Preventive care for gastrointestinal disorders from the perspective of the Iranian traditional medicine

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Objectives: Preventive care is a fundamental element in modern medicine, and scholars of the Iranian traditional medicine (ITM) have authored several publications in this field. According to ITM principles, healthy stomach plays a pivotal role in maintaining overall physical health. Lifestyle modifications, dietary recommendations and herbal medicines could contribute to the improvement of gastrointestinal (GI) health.

Materials and Methods: In this review, we searched the reliable sources of ITM and different medical databases to compare the information about preventive care for GI disorders.

Results: In this study, a close correlation was found between the functionality of GI system and other body systems. In other words, ailments in any system could lead to the dysfunction of stomach and vice versa. Simple changes in sleep patterns, personal hygiene and regular exercise could significantly improve the function of the GI system. Moreover, adherence to healthy diets is of paramount importance in this regard. Various herbal medicines could contribute to a healthy GI system; for instance, amla, clove, lemon, black mustard, saffron, ginger, aloe vera and mastic.

Conclusion: According to the results of this study, factors such as lifestyle regulations, dietary observations and following preventive care rules through the use of the aforementioned herbs could remarkably balance GI function and maintain overall health.

Keywords: Preventive medicine, Gastrointestinal diseases, Iranian traditional medicine, Lifestyle, Diet, Herbal medicine, Stomach

HN10100910282

The use of complementary and alternative medicine in treating breast cancer in women referring to the specified hospitals in Mashhad, 2014

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Objectives: Currently, the use of complementary medicine is considered to be of a great importance in prevention and treatment of diseases. Today, complementary and alternative medicine is increasingly used, especially in patients with life-threatening conditions such as HIV and cancer. It must be noted that the application of this method is permissible only alongside the conventional medicine methods.

Materials and Methods: This descriptive study was conducted on all the eligible patients with breast cancer, who were referred to the specified hospitals of Mashhad. A total of 458 patients who met the inclusion criteria were selected. Data were collected using a structured questionnaire during interviews, and then were analyzed using SPSS.

Results: Our results showed that 83% of women with breast cancer used these methods in various ways such as use of herbs, supplements, yoga, special diets, energy therapy, acupuncture and massage. Moreover, 5.79% of the patients avoided to inform their treating doctors and nurses about the use of complementary and alternative medicine, which is of utmost importance, especially while using herbal medicines, due to the risk of drug interactions. This issue can have various reasons, including physicians' and nurses' cynical views on the effectiveness of these products.

Conclusion: Combination of complementary and alternative medicine and the effect of mind on body can be applied as an efficient approach towards promoting the performance of breast cancer patients in various aspects of life, but it is necessary to train patients for using this method.

Keywords: Breast cancer, Complementary and alternative medicine, Effectiveness

HN10104960391

A survey of self-medication using complementary medicine in

pregnant women in Ahwaz, Iran

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Objectives: Self-medication is one of the most important public health concerns, especially in pregnant women owing to the importance of maternal and fetal health. This study aimed to survey self-medication using complementary medicine in pregnant women in Ahwaz, Iran.

Materials and Methods: In this cross-sectional study, 794 pregnant women referring to seven health clinics of Ahwaz were randomly recruited, based on their household record number with proper distribution among clinics. Data were collected using a semi-structured questionnaire via interviews. Data were analyzed, using Chi-square and logistic regression. p-value less than 0.05 was considered statistically significant.

Results: The results of the present study showed that 30.6% of pregnant women used self-medication. In total, 52.2% of these women used plant compounds and only 1% applied phlebotomy and acupressure. The highest frequency was reported in the age group of < 25 years. The most common cause of self-medication was innocuousness of medicinal herbs (70.4%). Gastrointestinal disorders were the most frequent cause of self-medication (66.9%), and physicians (42%) were the most frequent source of information about complementary medicine and medicinal plants. Also, self-medication was significantly associated with age, education and occupational status (p<0.05).

Conclusion: Considering the lack of awareness about the complications of medicinal herbs and the following consequences of these compounds, self-medication is prohibited, especially in pregnant women.

Keywords: Complementary medicine, Pregnant women, Self-medication

HN10108180988

Evaluation of the effects of dried

dill supplements on inflammatory markers, insulin sensitivity and lipid profile abnormalities in patients with type II diabetes

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Objectives: Today, medicinal herbs are widely used in complementary medicine, given their fewer side-effects for patient treatment and prevention of diseases including diabetes. The purpose of this study was to investigate the effects of dried dill powder (*Anethum graveolens*) on inflammatory markers, insulin sensitivity and lipid profile in patients with type II diabetes.

Materials and Methods: The present double-blinded, clinical trial was performed on 60 diabetic patients in Tabriz, Iran in 2013. After meeting the inclusion criteria, the patients were divided into two groups: intervention (daily consumption of 3.3 g of dill powder) and control (the same amount of starch) groups. The study continued for 8 weeks. Interleukin-6, tumor necrosis factor, lipid profile, fasting blood sugar, serum insulin and high-sensitivity C-reactive protein were measured via biochemical methods at the beginning and end of the study. Insulin resistance index was calculated with the use of the following formula: fasting insulin × fasting glucose/405 (IRCT: IRCT201112312017N6).

Results: There was a significant decrease in inflammatory factors, fasting insulin, total cholesterol and low-density lipoprotein in the

intervention group, even after adjusting the results based on baseline values and confounding variables ($p < 0.05$, $p = 0.003$, $p = 0.016$ and $p = 0.009$, respectively). Surprisingly, dill powder supplements increased the level of fasting blood sugar, although it was not statistically significant.

Conclusion: Dill powder could decrease inflammatory factors and improve insulin sensitivity and some lipid parameters. However, further research is required in this area to confirm the findings.

Keywords: Anethum graveolens, Inflammatory factors, Insulin sensitivity, Lipid profile, Type II diabetes

HN10105470409

A review of complementary medicine in irritable bowel syndrome

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Objectives: Irritable bowel syndrome (IBS) with 5–20% prevalence, is one of the most common functional gastrointestinal disorders which manifests with chronic stomach pain and a change in bowel habits in the absence of organic disease.

The etiology of this syndrome is unknown and only a few hypotheses are raised about the possible role of unnatural intestinal peristalsis, nervous and psychological system disorders, genetics, etc. Since drug treatments cannot affect all symptoms and psychological disorders of this syndrome, many doctors and patients are not satisfied with these drugs, and this matter had led to using complementary treatments. Hence, we performed a review on complementary treatments of this syndrome.

Materials and Methods: This is a review study performed in 1394, using internal and external sources and articles on drug and non-drug treatments of IBS; all the papers that were written in languages other than Farsi or English were omitted from the study.

Results: Complementary treatments for this syndrome include herbal treatments, hypnotherapy, acupuncture, therapeutic touch, behavioral therapy, psychotherapy, and sleep

therapy. Thyme inhibits Ileum contractions, abdominal cramps and diarrhea. Plant gel is effective in reducing pain, bloating, nausea, and bowel movements. Consuming turmeric, mint, coriander, and lemon balm, especially in combination is very effective.

Acupuncture reduces pain and intestinal peristalsis. Hypnotherapy, therapeutic touch, behavioral therapy, psychotherapy, and sleep therapy are effective in reducing anxiety and mental pressure, promoting relaxation and sleep, reducing stress, and agitation. Since anxiety has a very important role in the etiology of this syndrome and exacerbation of symptoms, these methods can be used as complementary treatments.

Keywords: Irritable bowel syndrome, Drug treatment, Complementary medicine

HN10107360737

Study of thymoquinone effect on growth and cell proliferation in leukemic lymphoblastic cell lines (jurkat)

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Objectives: Acute lymphoblastic leukemia (ALL), a lymph proliferative disorder, is known and identified by its rapid proliferation of cancerous lymphoid cells. T-cell acute lymphoblastic leukemia (T-ALL) is characterized by the abnormal proliferation of pre-T cell clones that are blocked at an immature stage. Thymoquinone (TQ) is derived from the medicinal spice *Nigella sativa* (also known and referred to as black cumin); and exhibits anti-

inflammatory, anti-oxidant, and anti-cancerous activities. It has been shown in previous studies that TQ exhibits inhibitory effects on a variety of different types of cancers. In the present study, we set out to investigate the full effects of TQ on the growth and proliferation of leukemic lymphoblastic cells.

Materials and Methods: Jurkat cell line (C121) were cultured in standard conditions (consisting of 95% humidity, 5% CO₂) in RPMI 1640 supplemented with 10% FBS., with TQ was being dissolved in DMSO. Jurkat cells were then seeded in 96-well plates at densities of 10*10³ per well, 24 hours before experiment and were treated with the following: vehicle control (DMSO), TQ at 10-100 μM, untreated cells as control subjects as well as cell-free wells as blanks. Cell viability was measured periodically by MTS assay after each 24, 48 and 72 hours.

Results: Findings show that the inhibitory effect of TQ at concentrations of 10 - 100μM on the growth of Jurkat cells were statistically significant (p<0.05). In addition to this, incubation with TQ for 24, 48 and 72 hours had exhibited an IC₅₀ (inhibition concentration) of about 20, 16 and 14 μM, respectively.

Conclusion: The study has shown that TQ was effective on proliferation inhibition in Jurkat lymphoblastic cell line, when administered in a time and dose-dependent manner. Thus, studies concerning apoptosis mechanisms could be a step towards progress for therapeutic goals, and could be considered in future studies and viable forms of treatment.

Keywords: Acute lymphoblastic leukemia, Jurkat, Thymoquinone

HN10102570835

In vitro anti-cancer potential and chemical analysis of *Agaricus bisporus*

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So far, few compounds of *Agaricus bisporus* (e.g., lectin, unsaturated fatty acids and polysaccharides) have been identified to exert in vitro or in vivo anti-cancer activities; therefore, further research is required to identify more bioactive compounds. The main aim of the present study was in vitro evaluation of the anti-cancer potential of *A. bisporus* extracts and fractions. In addition, several wild-growing species of *A. bisporus* including *A. devoniensis*, *A. gennadii* and a wild brown isolate of *A. bisporus* were investigated for their possible anti-cancer activities. Anti-proliferative and cytotoxic properties of methanol-dichloromethane (1:1) crude extracts were tested on PC3 and MCF-7 cells. The results revealed that *A. bisporus* at 500 μg/ml concentration had significant effects on PC3 (46%) and MCF-7 (40%) proliferation, while no significant anti-proliferation was observed in the extracts of other mushrooms. Four different fractions of *A. bisporus* extracts were separated, using a solvent polarity gradient in column chromatography. One of the fractions, eluted with the mixture of ethyl acetate in petroleum ether (40:60), exhibited potent anti-proliferative activities, as well as cytotoxicity in both PC3 and MCF-7 cells, even at a low concentration (125 μg/ml). Flame ionization detector for gas chromatography, as well as fourier transform infrared spectroscopy, showed no fatty acids in the fractions. The obtained data in this study illustrated the anti-cancer potential of mycochemicals present in the mushroom fractions in vitro. Therefore, the present study indicates the need for further chemical analysis and investigations.

Keywords: *Agaricus Bisporus*, Anti-proliferation, Chemical Analysis

HN10102751017

Stress-induced eating from the perspective of Iranian traditional medicine

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Objectives: Currently, there is little identified data on stress-induced eating. Stress is believed to affect human eating behavior, which has been confirmed in different studies. High cortisol reactivity in response to stress can lead to eating, according to current medicine. In this review, we assessed predictors of eating caused by stress in Iranian traditional medicine.

Materials and Methods: All available studies related to stress-induced eating including books, journals and other references in Iranian traditional medicine were studied and assessed.

Results: The current study showed likely relationship between stress (perceived and chronic), drive to eat, and reported food intake frequency according to Iranian traditional medicine. Extreme cold mezzaj (temperament) due to stress can produce the sauda humor (black bile). On the other hand, in Canon of Avicenna it is pointed out that frail spleen is presented by inability to attract sauda of the liver, as a result sauda increases in the blood. Therefore, accumulated sauda in the space between the stomach and the liver (abdomen filling, including pancreas, etc.) can enter the orifice of the stomach and may lead to increased appetite.

Conclusion: These results suggest that humor changes due to stress may influence subsequent eating behavior. It is recommended to conduct more studies on stress-induced eating from the perspective of traditional medicine.

Keywords: Stress, Eating, Sauda, Iranian traditional medicine

HN10101530044

Valeriana officinalis as a natural drug in treatment of bipolar mood patients

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Objectives: Although pharmacotherapy and psychotherapy are the main treatments for bipolar mood disorders, the use of complementary medicine has also gained popularity over the past decade. Valerian is an herb commonly marketed for treatment of insomnia, anxiety and depression. However, its positive effects on bipolar disorders have been reported, as well. Similar to benzodiazepines, valerian affects GABA-A receptors.

Materials and Methods: In a clinical trial, 87 patients with confirmed bipolar mood disorder (according to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition-Text Revision and clinical examinations) were randomly selected. The inclusion criteria included patients aged between 18 and 75, with a Mania Rating Scale score of 12 or above and receiving the conventional mood stabilizers for at least three months. After obtaining written consents, the participants were randomly allocated to two groups of valerian (n=47) and control (n=40). The valerian group received 700-1050 mg/day valerian besides the routine medicines. The study lasted for two months and the patients were tested using the Mania Rating Scale and Global Assessment of Functioning at baseline at the first and second months.

Results: In the valerian group, severity and frequency of mania symptoms decreased from 62.93±15.21 at baseline to 41.38 ± 11.94 after one month and to 32.90 ± 9.57 at the end

of the second month. In the control group, the values were 70.9 ± 9.34 , 61.82 ± 2.04 and 56.05 ± 10.43 at baseline and the first and second months, respectively. The two groups were not significantly different in terms of baseline frequency or severity of symptoms. However, significant differences in the mentioned indices were observed between the two groups at the end of the first and second months of treatment.

Conclusion: Based on our findings, valerian has beneficial effects, as a complementary medicine, in treatment of bipolar mood disorders. Nevertheless, further studies in this field are required.

Keywords: Bipolar mood disorder, Complementary medicine, Valerian

HN10104680412

Effects of ergonomics training and knee braces on temporary musculoskeletal disorders in saffron harvesters

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Objectives: Saffron harvesting may involve the risk of musculoskeletal disorders in farmers since they must kneel while harvesting the crops and this applies tremendous pressure on the knees. This study aimed to compare the use of knee braces and educational pamphlets in the prevention of musculoskeletal disorders among saffron harvesters.

Materials and Methods: This clinical trial with the registration number of IRCT2012100811043N1 was conducted on 60 saffron field workers in Gonabad, Iran.

Samples were selected by coin flipping and divided into two groups of 30, including knee brace and pamphlet. Measurement tools were Rapid Entire Body Assessment (REBA) and Body Discomfort Chart (BDC). During the saffron harvest before the intervention, different body parts of the workers were coded based on REBA, and A, B and final scores were calculated. This process was repeated after the intervention, and data analysis was performed in SPSS V.16, using independent t-test, Chi-square, Fisher's exact and Mann-Whitney tests.

Results: According to the results of BDC, intervention with knee braces had significant effects on knee discomfort ($p < 0.001$). In addition, results of REBA indicated that intervention with educational pamphlets had significant effects on torso ($p = 0.01$), A ($p = 0.025$), C ($p = 0.027$) and final scores ($p = 0.028$). Overall, use of educational pamphlets was observed to be more effective compared to the use of knee braces.

Conclusion: According to the results of this study, both intervention methods could effectively prevent discomforts in the knee and torso among saffron harvesters.

Keywords: Musculoskeletal disorders, Saffron harvesters, Ergonomics training

HN10101400192

Study of the antimicrobial effects of henna and eucalyptus extracts on staphylococcus aureus isolated from skin lesions

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Objectives: Henna is a small plant with therapeutic properties against bacterial infections including Staphylococcus aureus. The aqueous and alcoholic extracts of this plant can be used for the treatment of skin wounds.

Eucalyptus is another plant with the same therapeutic properties, the ethanolic extracts of which can be used to treat many infectious and diseases caused by methicillin susceptibility or Staphylococcus aureus resistance. Researchers have attempted to find new herbal combinations to substitute antibiotics in order to improve the side effects and reduce the costs of chemical drugs. Therefore, in this study, the antimicrobial effects of henna and Eucalyptus have been investigated on Staphylococcus aureus isolated from skin lesions.

Materials and Methods: In this study, henna and Eucalyptus extracts were obtained. The antimicrobial effects of aqueous and alcoholic extracts of henna were investigated on 45 Staphylococcus aureus isolates, resistant and susceptible to methicillin (15 resistant isolates and 30 susceptible isolates). Moreover, the antimicrobial effects of ethanolic extracts of Eucalyptus were tested on 15 isolates of Staphylococcus aureus resistant to methicillin, using disk diffusion method and measurement of the diameter of non-growth halo on Mueller-Hinton agar. Then, the minimum inhibitory concentrations of these two extracts were determined, using micro-dilution broth. Staphylococcus aureus isolates resistant and susceptible to methicillin were separated from skin ulcers.

Results: In this study, the aqueous extracts of henna had an average minimum inhibitory concentration of 7.2 mg/ml and the ethanolic extracts had a minimum inhibitory concentration of 9.2 mg/ml. The ethanolic extracts of Eucalyptus had a minimum inhibitory concentration of 0.08 mg/ml.

Conclusion: The results showed that henna and Eucalyptus have antibacterial effects against Staphylococcus aureus isolates, particularly methicillin-resistant strains. Therefore, they can be used in the treatment of skin infections and wounds. It is hoped that these natural plants can promote the prevention and treatment of skin infections.

Keywords: Anti-bacterial activity, Eucalyptus, Henna, Staphylococcus aureus

HN10106020549

Training needs assessment,

evaluation of education and training courses of apothecary shops of Chaharmahal va Bakhtiari province

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Objectives: A considerable part of our society uses medicinal herbs to cure diseases, these sought after herbs are distributed by apothecaries. In addition, many of people who work in this profession are not especially trained and do not have academic education related to medicinal herbs, a significant number of them are not even trained in the traditional way, which is learning the skills and experiences with the student-mentor method in apothecary shops; they only turned to this profession due to lack of suitable employment, strong demand for medicinal herbs and considerable profitability.

Several studies show that education level of apothecarists in this field is very low in most parts of Iran. This study aims to assess training needs, determine the level of education and participation of existing apothecarists in training courses in Chahar Mahal and Bakhtiari province in 1394.

Materials and Methods: This is an analytical and descriptive study. 48 participants were selected, the data was gathered using a questionnaire. After interviewing, making acquaintance and building responder trust, data was collected. Subsequently, data was analyzed using SPSS software and analytical tests.

Results Average age of participants was 45.3 years, 93.4% were male, and 87.5% were married. The average work experience was 17.6 years. Education level of 12.5% was elementary, 33.3% had high school diplomas, 16.7% held associate degrees, 29.2% had bachelor's degrees, and 8.3% held master's degrees; 37.5% had related

education, and 62.5% had no related education. 50% learned their skills through their mentors. 45.8% had participated in no training courses, while 54.2% had training course participation. 29.2% of participants had university training, and 70.8% had taken private sector training courses. Educational needs of participants were, in order, medicinal herb dosage, followed by their side effects and complications when combined with chemical drugs. 73.8% of participants were willing to participate in training courses held by universities.

Conclusion: Distributing and selling medicinal herbs by those without professional skills is considered unauthorized intervention and can cause numerous problems for patients. This treatment fault in Iranian traditional medicine is very common and needs proper intervention. It is recommended that qualified people from Ministry of Health and accredited organizations organize the apothecaries and hold modern training courses for them to improve their basic professional knowledge. By doing this we can prevent the work of quacks and unauthorized individuals in this profession.

Keywords: Training needs assessment, Education level, Training course, Apothecary shop

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Use of herbal medication in osteoarthritis: a systematic review

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Objectives: In recent years, there has been growing concern regarding pain relief in osteoarthritis patients, as well as the use and side effects of COX-2 selective inhibitor and non-steroidal anti-inflammatory drugs (NSAIDs). This study aimed to evaluate the efficacy of herbal medication in the reduction of joint pain.

Materials and Methods: This systematic review was conducted via searching in databases

such as Cochrane Library and MEDLINE until June 2014. Articles with available abstracts written in English were included in this study. In addition, manual search was performed within the reference lists of the selected articles. Two researchers independently evaluated the inclusion criteria, quality and extracted data from the articles.

Results: According to the literature of traditional medicine, medicinal plants such as aloe vera, ginger, green tea, thunder god vine, turmeric, willow bark and jingui were widely used as analgesic agents for osteoarthritis patients.

Conclusion: According to the results of this study, there is undeniable evidence about the use of medicinal plants for pain relief in patients with osteoarthritis.

Keywords: Herbal medicine, Joint pain, Osteoarthritis

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Chinese herbs in stress ulcers: a systematic review

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Objectives: Stress ulcer (SU) is a major complication in patients experiencing high levels of stress and it is commonly observed in patients admitted to intensive care units. This study aims to investigate the efficacy of Chinese herbs in treating stress ulcers.

Materials and Methods: A systematic electronic search was performed in PubMed and Google scholar up to May 2014. We selected the articles that had English abstract. Our manual search was conducted using the reference list of each article. Two reviewers independently assessed eligibility and quality of the articles and extracted the data.

Results: A total of 28 papers, most of which were in-vivo studies conducted on animal models and were published between 1989 and

2015, were evaluated.

Conclusion: Our study demonstrated that despite ample evidence on the efficacy of various Chinese herbs in treating SU, further investigations are required to prove this impact in human beings.

Keywords: Chinese herbs, Intensive care unit, Stress ulcer

HN10105920652

Sleep prolonging impact of fractions of *Ocimum basilicum* extract in pentobarbital-induced sleep in mice and possible mechanism

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Objectives: Sleep disorders are accompanied by several complications and currently used soporific drugs can induce unwanted effects such as psychomotor impairment, tolerance, amnesia, and rebound insomnia.

Materials and Methods: This work was an experimental study on 56 mice which were randomly divided into 7 groups: saline (control); diazepam (3 mg/kg, positive control), fractions of hydro ethanolic extract of *Ocimum basilicum* including: ethyl acetate fraction (EAF, 50 mg/kg); *n*-butanol fraction (NBF, 50 mg/kg); water fraction (WF, 50 mg/kg); and saline containing 10% DMSO (vehicle for EAF and NBF) and flumazenil (1mg/kg). All test compounds were injected intraperitoneally 30 min before pentobarbital administration (30 mg/kg). Duration and latency of pentobarbital-induced sleep were recorded. Also, cytotoxicity of fractions was tested on neural and fibroblast cells using MTT assay.

Results: The hypnotic effect of fractions was comparable to that induced by diazepam. WF, EAF and NBF at 50 mg/kg could increase sleep duration ($p < 0.001$). The sleep latency was decreased by NBF ($p < 0.001$), but not by WF and EAF. Also, flumazenil could significantly reverse hypnotic effect of NBF ($p < 0.001$). None of the fractions had any significant effects on viability of neuronal PC12 cells and L929 fibroblast cells.

Conclusion: The present data demonstrated that *Ocimum basilicum* fractions potentiate sleeping behaviors without any cytotoxicity. The main component(s) responsible for the hypnotic effects of this plant is most likely non-polar agent(s) found in NBF. Moreover, NBF acts on neurons and sleep by GABA receptors respects to flumazenil.

Keywords: Fractions, Pentobarbital, *Ocimum basilicum*, Cell toxicity, Sleep

HN10107830843

Interactions between cardiovascular diseases and depression: a comparison of conventional medicine and Iranian traditional medicine

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Objectives: Cardiovascular diseases (CVD) and depression are common causes of mortality and morbidity worldwide. Co-morbidity and interactions between these two disorders have been historically considered by the Iranian traditional medicine (ITM), as well as conventional medicine (CM). Comparing these two approaches could lead to the better understanding of the connection between these two conditions.

Materials and Methods: In this review, we found 147 relevant articles published during 1964-2014, which were indexed in databases such as PubMed and Scopus. Correspondingly, 21 key textbooks of ITM including the Canon of Medicine, Al-Adviat-ol-Ghalbiah, Al-Havi, Kamel-o-Sana'a, Exir and House of Wisdom (Kholasat-ol-Hikmah) were reviewed for related concepts.

Results: Regarding the interactions between CVD and depression, findings of CM mainly focus on the following factors:

1. Cardiovascular side-effects of antidepressant agents
2. Depression as a predictor of CVD disability
3. Depression as a mimicker of CVD symptoms (i.e., non-cardiac chest pain)
4. Prevalence of the co-morbidity of CVD and depression
5. Possible common biological pathways of depression and CVD (e.g., alterations in the hypothalamic-pituitary axis, cardiac rhythm disorders, and hemorheologic, inflammatory or serotonergic changes)

On the other hand, ITM literature mainly emphasizes the definition of the following factors:

1. Pathophysiological pathways, using the concept of Breath (Rouh) dysfunction as the main co-existing/causal biological factor contributing to bilateral causality in CVD and depression
2. Symptoms used for the accurate pre-diagnosis, treatment modality and assessment of the prognosis of both diseases
3. Preventive recommendations in the normal population
4. Therapeutic options in the prodromal or clinical phase of both diseases

Conclusion: According to the results of this study, recent evidence about CVD and depression interactions in CM literature are correspondent with ITM textbooks. However, the holistic view of ITM could offer more effectual methods for the clinical management of CVD and depression.

Keywords: Cardiovascular Diseases, Conventional Medicine, Depression, Interaction, Iranian Traditional Medicine

HN10103620197

The efficacy of topical use of

petroselinum crispum (parsley) versus hydroquinone cream for reduction of epidermal melasma: a randomized clinical trial

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Objectives: Melasma is a common acquired hyperpigmentation disorder. The treatment of melasma with conventional drugs causes complications in patients.

This study was conducted to compare the effect of the topical use of *Petroselinum crispum* (parsley) with that of 4% hydroquinone cream on reduction of the severity of epidermal melasma.

Materials and Methods: This double blind randomized clinical trial was performed in 2014–2015 in Iran. The melasma area and severity index (MASI) were used to determine the severity of melasma. 27 patients in the control group received 4% hydroquinone cream (Eldopaque/Eldoquin), and 27 patients in the case group received *Petroselinum crispum* brewed every night for 8 weeks. The data were analyzed using independent *t*-test and paired *t*-test in the SPSS software (version 20).

Results: Mean age of the participants was 32 years (range: 19–55 years). Mean severity of melasma decreased from 6.66 to 4.92 ($p=0.002$) in the case group receiving parsley, and from 6.68

to 5.06 ($p=0.000$) in the control group receiving hydroquinone. The decrease in severity was statistically significant in both groups ($p<0.05$). There was no significant difference between the two groups in terms of the severity of melasma after the intervention ($p=0.858$).

Conclusion: A similar positive response was found to both treatments with hydroquinone and parsley. Although further studies are needed in this regard, it seems that the topical use of parsley may merit the attention of nurses and other medical professionals as a cost-effective therapeutic method that causes fewer complications and improves the self-image of patients.

Keywords: Melasma, Hydroquinone cream, *Petroselinum crispum* (parsley), Medicinal herbs

HN10100790028

Effects of electroacupuncture combined with diet adjustment and aerobic exercises on BMI, WHR, body fat in female simple obesity patients without premenopausal syndrome

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Objectives: Obesity is a serious, prevalent and refractory health problem. Overweight and obese individuals are at great risk of a variety of medical conditions including diabetes, hypertension, dyslipidemia, fatty liver, cardiovascular disease and polycystic ovary syndrome. The body mass index (BMI) is generally accepted as classification of obesity. According to World Health Organization guidelines, a BMI of more than 25.00 kg/m² is considered as overweight, 25-29.99 kg/m² as pre-obese and over 30.00 kg/m² as obese. The

aim of this study, is to compare the therapeutic effects of electroacupuncture combined with diet adjustment and aerobic exercise with diet adjustment combined with aerobic exercise for treatment of simple obese women without premenopausal syndrome, in Khoramabad city, Iran.

Materials and Methods: A total of 80 patients with obesity were examined prospectively. In this study, there were four groups including two control groups with BMI 25-30 and BMI \geq 30, and two observation groups with BMI 25-30 and BMI \geq 30. The control groups were treated with diet adjustment combined with aerobic exercise. The observation groups were treated with acupuncture. After one course of treatment, the body weight changes, waist/hip ratio (WHR), BMI and body fat in the four groups were observed before and after the treatment.

Results: After one course of treatment, body weight, body fat, WHR and BMI in the observation groups were ostensibly lower than the control groups ($\alpha=0.000$).

Conclusion: Both types of treatment can decrease the body weight, WHR, BMI and body fat of patients with simple obesity, while, the effect of acupuncture combined with dietary adjustment and aerobic exercise is more obvious in lowering body weight, body fat, BMI and WHR.

Keywords: BMI, Diet adjustment, Electroacupuncture, Premenopausal syndrome, WHR

HN10106560634

Comparison of skin electrical resistance at the acupressure point ST36 between men and women

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Objectives: Meridians and acupuncture points constitute a significant part of Chinese medicine. In recent years, many studies have been conducted to determine whether acupuncture points have different properties from the surrounding area. Based on one of the proposed theories, these points have different electrical properties. Yin and Yang theory is another fundamental principle of Chinese medicine. Based on this theory, the entire world is divided into two poles of Yin and Yang. For instance, day, left and male pertain to Yang, while night, right and female pertain to Yin. In this study, we measured the electrical resistance of acupuncture points in male and female subjects. We also evaluated the impact of these factors on the electrical resistance of these points.

Materials and Methods: This study was performed on 20 healthy volunteers (10 males and 10 females) within the age range of 19-38 years at the Department of Acupuncture at Beijing University of Traditional Chinese Medicine. The electrical resistance of acupuncture points was evaluated in the morning (9-11 am) in the right sides of the body. A four-electrode electrical resistance measuring device was used with an intermittent current. The acupressure point ST-36 was selected on the right leg.

Results: The electrical resistance varied between male and female subjects at the studied points. Higher electrical resistance was reported in 96% of females, compared to males.

Conclusion: According to Yin and Yang theory, Yang pertains to male and Yin pertains to female. Stronger meridian activities have been suggested in males and the results of the present study confirm this point. However, further research is required in this area.

Keywords: Acupuncture, Electrical Resistance

HN10105900463

Preventive effects of a bi-ingredient formulation of *Malvaceae* species on urinary toxicity caused by radiotherapy in patients with prostate carcinoma: a randomized

clinical trial

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Objectives: *Malva sylvestris* and *Althea officinalis* are genus *Malvaceae* species used in the Iranian traditional medicine (ITM) for the treatment of dysuria. Preventive effects of these species are attributed to high quantities of mucilage, antioxidant properties and wound healing agents, which are beneficial in the treatment of urinary toxicity during radiotherapy. This study aimed to evaluate the prophylactic effects of a bi-ingredient formulation (BIF) of these herbs in reducing urinary symptoms in patients with prostate adenocarcinoma.

Materials and Methods: This double-blind, placebo-controlled, randomized clinical trial was conducted on patients undergoing external beam radiotherapy (EBRT) for prostate adenocarcinoma, comparing BIF versus placebo. Patients were randomly assigned to BIF (3.5 g of mixed powder of *M. sylvestris* and *A. officinalis*, 3 times daily) and matching placebo groups. All patients started medication therapy one day before radiotherapy and continued for 45 days. Afterwards, symptoms were evaluated on a 0-10 scale, and visual prostate symptom score (VPSS) was calculated before radiotherapy and every 2 weeks for 6 weeks after radiotherapy. In case of urinary retention, intolerable

urinary symptoms, or willingness to discontinue the trial, subjects were excluded from the study.

Results: In total, 85 patients were enrolled in this study during April 2013-August 2014, and 60 subjects completed the study (medication therapy: 31, placebo: 27). Dysuria was detected in 21 patients (77.7%) of the control group and 23 patients (69.6%) of the BIF group (odds ratio: 1.52). Moreover, mean scale of dysuria and VPSS was significantly higher in the placebo group compared to the BIF group at two, four and six weeks after radiotherapy ($p < 0.05$).

Conclusion: According to the results of this study, prophylactic BIF could significantly reduce the severity of dysuria and VPSS within the first 6 weeks of EBRT.

Keywords: Malvaceae, Radiotherapy toxicity, Dysuria

HN10103790285

The effective terms in the treatment of inflammatory bowel disease

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Objectives: Inflammatory bowel disease is one of the common diseases of digestive system. The more a society moves towards industrialization, the more the health level of the society and life stresses increase and the more inflammatory bowel diseases can be found in the society. The cause of inflammatory bowel disease is unknown. However, factors such as impaired immune functions, oxidative stress, intestinal microbial contents, nitric oxide, leukotrienes, and genetic factors can be considered to be involved in causing this disease. Just like all the other illnesses with no identified causes, inflammatory bowel disease does not have a curative treatment. Most of the classic treatments either do not have anti-inflammatory features or suppress the immune system. Patients are forced to take medicine for life and even with consuming drugs, 30% of the patients do not respond well to the treatment. That is why patients and physicians tend towards non-classic treatments. In Iranian traditional medicine, signs and symptoms of

intestinal ulcers are somehow similar to the symptoms of inflammatory bowel disease, and multiple articulated treatment methods are mentioned in the resources of traditional medicine. We can use these methods by accurately evaluating and performing clinical research to improve the symptoms of this disease.

Materials and Methods: The present study is a review study based on the literature of traditional medicine, in which five reliable and major resources of pharmacology namely “The Canon of Medicine”, “Zakhireye Khwarazmshahi”, “Tohfato Moemenin”, “Alabniyah an Haghayeghel Adviyah” and “Makhzanol Adviyah” were evaluated and the most frequently used terms were extracted from them for future studies.

Conclusion: After evaluating five traditional medicine books, 60 terms were identified for curing intestinal ulcers from which 11 had the highest frequency the in sources. These terms were as follows: Dock which was mentioned in all the five books, gum which was cited in four of the books, and other terms mentioned in three books include rice, opiate, berberis, bsbaseh, oak, Malva silvestris, damol’axaveyn. Other common terms mentioned in two books were pomegranate and its skin, jujube, emblica, mastic, myrtus, sumac and hyssop. Further studies are recommended on effectiveness of some terms such as dock, berberis, gum and oak.

Keywords: Inflammatory bowel disease, Intestine ulcers, Term

HN10108751011

Evaluation of the effects of chamomile capsule on postpartum anxiety in women

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Objectives: Postpartum period is associated with

physical and emotional vulnerability, and most women manifest symptoms of increased stress, anxiety and negative thoughts. Different methods could be used to decrease anxiety during the postpartum period. Considering the adverse side effects of chemical drugs, use of herbal medications is recommended by many researchers. Apigenin is a flavonoid found in chamomile, which could attach to benzodiazepine receptors and exert anti-anxiety effects. This study aimed to determine the effects of chamomile on postpartum anxiety in women.

Materials and Methods: This clinical trial was performed on a sample size consisting of 35 women with natural delivery in Om-ol-Banin Hospital of Mashhad. Simple random sampling was the method of choice, and anxiety of the subjects was measured using Spielberger's state anxiety inventory within 2-4 hours after delivery. Afterwards, 1000 mg of chamomile capsule administered orally to each subject, and six hours after intervention, the level of anxiety was measured again. Data analysis was performed using SPSS V.16 and paired t-test.

Results: In this study, mean of anxiety before intervention was 37.1 ± 6.1 , while it was 33.5 ± 6.4 after the intervention with chamomile capsule, which is indicative of a significant reduction ($p=0.003$).

Conclusion: According to the results of this study, chamomile could effectively decrease anxiety in women during the postpartum period without any adverse consequences.

Keywords: Anxiety, Chamomile, Postpartum

HN10101810062

Comparison of the effects of taping and exercise on functional disability and lumbar lordosis in the second trimester of pregnancy

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Objectives: Changes in the physical condition of pregnant women may lead to lumbar lordosis in the spine and other disabilities. Exercise is considered as an effective solution for this problem during pregnancy, and taping is a new method in this regard. Taping provides a semi-rigid or rigid framework around different joints or tissues. This study aimed to compare the effects of taping and exercise on functional disability and lumbar lordosis during the second trimester of pregnancy.

Materials and Methods: This quasi-experimental study was conducted on 90 pregnant women selected from three different medical centers. Subjects were randomly divided into three groups of exercise, taping and control. Intervention was performed during 6 weeks, and flexible rulers were used to measure lumbar lordosis. In addition, the Oswestry Disability Index was used to calculate the rate of functional disabilities. Data analysis was performed using the Kolmogorov-Smirnov test, ANOVA, repeated measures and paired t-test.

Results: In taping and exercise groups, there was a statistically significant difference in the rate of disability at different times ($p < 0.001$). However, changes in disability were not significant in the control group ($p = 0.072$). In the exercise group, rate of lumbar lordosis was higher before intervention, and the difference was significant after the intervention ($p < 0.002$). Moreover, rate of lumbar lordosis was not significantly different before and after the intervention in the taping group ($p = 0.776$) and control group ($p = 0.586$).

Conclusion: According to the results of this study, exercise and taping could be effective in increasing the physical strength in pregnant women. However, exercise was found to have more significant effects on the reduction of lumbar lordosis.

Keywords: Pregnancy, Exercise, Taping, Lumbar lordosis, Disability

HN10108220867

An investigation of additive effect of Nigella sativa powder on the number of monocyte cells in lab rats with visceral leishmaniasis

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Objectives: Nigella Sativa is an herbaceous plant belonging to the buttercup family. It improves T-helper lymphocytes/suppressor T-cells ratio and also increases natural killer cells' activity. This study aimed to determine the impact of Nigella sativa on the monocyte cell count in lab rats with visceral leishmaniasis.

Materials and Methods: After experts' approval, Nigella sativa was powdered by means of a standard method and was mixed with rat chow at doses of 0.01, 0.1 and 1 g/kg of body weight. A total of 24 male rats BALB/c with similar conditions were selected. Before the test, blood samples were collected to determine the percentage of monocytes. Then, a 0.1 ml parasitic suspension strain of leishmania infantum promastigotes containing 2 million infected cells was injected to the rats. The rats were randomly divided into four groups (three experimental and one control group). Following five weeks, 3 ml blood was drawn from the mice's heart to provide peripheral blood smear and to determine the monocyte count. All the data were entered into SPSS and ANOVA was performed to analyse them.

Results: The numbers of parasites in the control group before and after inoculation of parasites were $3.1 \pm 1.2\%$ and $4 \pm 1.7\%$, respectively. Moreover, the numbers of monocytes before and after inoculation of parasites in the rats receiving doses of 0.01 g/kg, 0.1 g/kg and 1 g/kg were $3.5 \pm 1\%$ and $3.3 \pm 1.6\%$, $4.1 \pm 1.2\%$ and $4.9 \pm 1.1\%$, $5.1 \pm 1.3\%$ and $3.2 \pm 1.7\%$, respectively. Parasitic load at the beginning of the injection was 2 million promastigotes in all the groups. After five weeks, it was 3.39×10^6 , 2.81×10^6 , 2.1×10^6 and 1.71×10^6 in the control group rats receiving doses of 0.01, 0.1 and 1 g/kg, respectively.

Conclusion: Due to the increased number of efficient monocytes and low parasitic load in experimental groups especially at dose of 1 g/kg, Nigella sativa can be effective in increasing phagocytes. Therefore, it can be used to accelerate the recovery process in diseases such as kala-azar.

Keywords: Leishmaniasis, Monocyte cells, Nigella sativa

HN10108390920

The effect of guided imagery with religious content on controlling anxiety and hypertension in patients undergoing endoscopy and colonoscopy

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Objectives: Gastrointestinal disorders are very common, and endoscopy and colonoscopy are the most important diagnostic procedures for these disorders. However, they can cause fear and anxiety in patients due to their aggressiveness. This anxiety before endoscopy and colonoscopy reduces the tendency of patients and increases the time of endoscopy and colonoscopy. This study aims to investigate the effect of guided imagery with religious content on anxiety and blood pressure of candidates for endoscopy and colonoscopy.

Materials and Methods: This randomized clinical trial was performed on 60 candidates for endoscopy and colonoscopy referring to 22 Bahman Hospital in Gonabad, 2014. We randomly divided the patients into two groups of control and intervention according to our criteria. The audio file of guided imagery with religious content was played for the intervention group one hour before endoscopy and colonoscopy. The level of anxiety, blood pressure and pulse were measured in both groups before endoscopy and colonoscopy. Measuring tools were The State-Trait Anxiety Inventory and Mercury Sphygmomanometer.

Results: Before the intervention, there were no significant differences between the two groups in terms of demographic variables, level of anxiety, blood pressure and pulse. After the intervention, mean and standard deviation of anxiety level and patient's pulse in the intervention group (30 patients) showed a significant difference, as compared to the control group (30 patients), but in terms of blood pressure, no significant difference was found.

Conclusion: Guided imagery in candidates for endoscopy and colonoscopy could reduce the level of anxiety and pulse before performing these methods. Therefore, using this cost-effective and efficient technique is suggested as an alternative nonmedicinal method for reducing anxiety and hypertension of patients before performing invasive diagnostic procedures.

Keywords: Anxiety, Blood pressure, Colonoscopy, Endoscopy, Guided imagery

HN10106270504

Plants used as repellent or insecticide Based on *Zakhire Kharazmshahi*, an Iranian traditional medicine textbook

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Objectives: Plants, as the main source of medicines in traditional systems, may provide a potential alternative for the currently used insect control tools, because of their unique bioactive compounds. Vector-borne diseases are illnesses caused by pathogens and parasites in human population. One way to deal with the vector-borne diseases is developing new tools such as insecticide products and spraying technologies. Genetics and intensive application of insecticides are among the responsible factors

for the development of insecticide resistance. This study aims to develop a list of traditionally used plants to repel or kill insects.

Materials and Methods: We investigated the plants used as repellent or insecticide in *Zakhire Kharazmshahi*, a famous Iranian traditional medicine manuscript. These plants were identified by matching their names with scientific names using different comprehensive glossaries. We also went through the literature to find pharmacological evidence of their effectiveness in controlling insects.

Results: In this study, we identified 44 plants used as repellents or insecticides in *Zakhire Khaeazmshahi*. These plants belong to 30 species, 15 of which were investigated and were shown to have repellent or insecticide effects. So far, the other plants have not been investigated for the related pharmacological effect. Therefore, further studies are required on these plants.

Keyword: Iranian traditional medicine, *Zakhire Kharazmshahi*, Herbal insecticide, Repellent

HN10100590373

The prevalence of herbal treatment in neonates and its related factors

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Objectives: Many studies concerning herbal products and medicines in the treatment of adult diseases have been performed around the world. However, there are very limited studies on use of these drugs in children and especially neonates. According to reference books, the use of herbal medicines has several risks and their use is contraindicated in infants. This study aimed to determine the prevalence of herbal treatment in neonates and its related factors in Iranian families.

Materials and Methods: This prospective cohort study was conducted on 287 infants.

All babies were referred three times (3–5 days, 10–15 days and one month old) to health centers for treatment. In this study, mothers were asked about use of herbal medicines for the treatment of neonatal jaundice and demographic information was collected.

Results: Among 287 subjects, about 93 infants (32.4%) had been given at least one herbal medicine during their first month after birth. According to the results of logistic regression, there was no significant relationship between the use of herbal medicines and education level and age of mother, family income, and birth rank. Also, the rates of herbal medicine use were 24.6% in female and 40.6% in male babies, which is statistically significant.

Conclusion: The results of this study showed that treating neonates with herbal medicines is relatively prevalent, regardless of educational level and socio-economic status of the family. Therefore, herbal therapy is considered as a safe treatment method for the treatment of babies by the majority of Iranian families.

Keywords: Herbal treatment, Neonates, Logistic regression

HN10107910803

Evaluation of the *in-vitro* effects of alum on the strains of *Escherichia Coli* isolated from urban water sources in Zabol, Iran

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Objectives: Demands for antibacterial agents have been increasing recently. Use of synthetic, non-biodegradable chemical compounds for this purpose has given rise to environmental and health concerns. Alum is used as an astringent and antiseptic compound in the traditional medicine of Zabol city, located in Sistan and Baluchistan province in Iran. This chemical is used in the crystal form as a flocculent for water purification. This study aimed to evaluate the antibacterial properties of alum from the perspective of traditional medicine on the strains

of *Escherichia coli* isolated from water sources of Zabol, Iran.

Materials and Methods: In this study, we used the microtiter plate method to obtain different dilutions of alum (0.25, 0.5, 1 and 2%), which were added to 10⁸ CFU of *E. coli*. Afterwards, optical density was recorded during 4 hours. Data analysis was performed in SPSS.

Results: According to the results of this study, alum has significant effects on the growth inhibition of the examined bacterium. Moreover, this compound was observed to be highly potent against *E. coli* at the concentration of 2%.

Conclusion: Various natural products have been under scrutiny for the evaluation of their clinical potentiality in the prevention and treatment of diseases. In this study, alum was found to have remarkable antibacterial activity against *E. coli*. Therefore, this chemical compound could be effective in the inhibition of bacterial growth.

Keywords: *Escherichia coli*, Alum, Antibacterial activity

HN10103010139

Effects of isoflavones on the climacteric period in women

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Objectives: Vasomotor symptoms start about two years prior to menopause in women and include emotional disturbance and anxiety, physical changes (e.g., vaginal dryness), urinary incontinence and skin wrinkles. Other complications such as osteoporosis, cardiovascular diseases, and dementia could also occur during this period. Hormone therapy is primarily considered for the relief of menopause symptoms in postmenopausal women. However, since hormone replacement therapy may increase the risk of thrombosis, cerebral infarction and breast cancer, complementary and alternative medicine have drawn the attention of several

researchers. Phytoestrogens are secondary metabolites in plants and are characterized by polyphenolic structures with phenol rings. Phytoestrogens have similar structures to 17-beta estradiol, which is produced by the ovaries and binds to estrogen receptors. Flavones are mainly divided into two groups of flavonoids (e.g., isoflavones) and non-flavonoids (e.g., lignan). Isoflavones are abundant in soy and red clover. This study aimed to evaluate the effects of isoflavones on the symptoms associated with the climacteric period in women.

Materials and Methods: This systematic review was performed via searching the published literature on the effects of isoflavones in the climacteric period.

Results: In a systematic review of 15 clinical trials evaluating the effects of isoflavones on bone mineral density (BMD), isoflavones were reported to reduce bone loss. In addition, isoflavones had significant effects on mild-to-moderate hot flashes in women during early menopause. Conversion of daidzein to equol is a critical factor that exerts favorable effects on hot flashes. About 30-50% of Western women have the ability to convert daidzein to equol, and a daily dose of 80 mg or higher is recommended for Asian diets. Furthermore, a meta-analysis of 9 randomized comparative studies indicated that isoflavones could be effective in reducing bone loss. With respect to cardiovascular diseases, there has been growing interest in the benefits of soy protein since the U.S. Food and Drug Administration (FDA) claimed that consumption of soy remarkably reduces the risk of cardiac diseases. Rudkowska performed a meta-analysis of 74 randomized comparative studies and observed that soy protein was effective in the reduction of diastolic blood pressure and serum low-density lipoprotein (LDL) cholesterol. However, no changes were observed in the level of high-density lipoprotein (HDL) cholesterol. In addition, foods containing soy protein were found to have no influence on systolic and diastolic blood pressure. Since no studies have investigated the effects of isoflavones on the morbidity and mortality caused by cardiovascular diseases, these compounds are not recommended as the primary treatment for prevention purposes.

Conclusion: Conflicting results of studies on the benefits of phytoestrogens are attributable to the variable amount of isoflavones in soybeans

depending on different regions and seasons, as well as the intestinal bacteria involved in the conversion of daidzein to equol, which is variable depending on the race. Meanwhile, Asians are anticipated to have a relatively low risk of developing cardiovascular diseases, menopause symptoms, breast cancer, diabetes and obesity due to the considerable consumption of soy compared to Western populations.

Keywords: Climacteric, Complementary therapies, Isoflavones

HN10102860684

Evaluation of the hepatoprotective effects of rumex acetosella on the carbon tetrachloride-induced hepatotoxicity in rats

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Objectives: Medicinal herbs have long been used for the treatment of hepatic disorders. Rumex acetosella is one of the plants used for this purpose in the Iranian traditional medicine. This study aimed to investigate the protective effects of Rumex acetosella against the hepatotoxicity induced by carbon tetrachloride (CCl₄) in rats.

Materials and Methods: In this study, 64 albino Wistar rats were divided into 8 groups. Groups I-IV were considered as control and received normal saline (I and III) and vehicle (II and IV). Groups V-VIII received 250, 500, 750 and 1500 mg/kg of Rumex acetosella, respectively through gavage for 14 days. On day 15, groups III-VIII received one ml/kg of CCl₄ 1:1 in olive oil via intraperitoneal injection. Animals were killed 48 hours after CCl₄ injection, and their liver and blood samples were collected to determine the levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST) and alkaline phosphatase (ALP) for histopathological

examinations and antioxidant status. Acute organ toxicity of the formulation was evaluated by measuring the blood cell count, liver marker enzymes, creatinine, antioxidant status and histopathological examinations in all groups.

Results: According to the histopathological examinations, *Rumex acetosella* had dose-dependent effects on the reduction of serum levels of ALT, AST and ALP. Moreover, pretreatment with *Rumex acetosella* decreased lipid peroxidation, while maintaining the levels of glutathione and total antioxidant capacity. However, no significant effects were observed on the hematotoxicity and hepatotoxicity of the rats until *Rumex acetosella* treatment at the dose of 1500 mg/kg.

Conclusion: According to the results of this study, long-term use of *Rumex acetosella* leads to no side effects in any of the body organs. Therefore, this medicinal plant could be used against hepatic damages induced by xenobiotics. It is recommended that future studies be conducted on different models of hepatic injury as to find the exact hepatoprotective mechanisms of *Rumex acetosella*.

Keywords: CCl₄-induced liver damage, Hepatoprotective effects, Oxidative stress, Iranian traditional medicine

HN10102250089

The relationship between the prevalence of sports injuries and athletes' temperament from the perspective of Iranian traditional medicine in heavy and light sports

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Objectives: Some injuries are related to the nature of the sport and environmental factors,

and some others have origins in the athlete himself. Meanwhile, the nature or temperament of athletes has never been considered as a possible factor in causing injuries. Therefore, the purpose of this study is to evaluate the relationship between the prevalence of sports injuries and athletes' health from the Iranian Traditional Medicine point of view in high intensity and low intensity sports.

Materials and Methods: A total of 240 male athletes were randomly chosen for this study. In order to determine the temperament of the athletes we used warm and cold temperament questionnaires, and athletes' injury report form was used to evaluate the prevalence and severity of sports injuries. Chi-squared and Fisher's exact tests, as well as Kruskal-Wallis test were used to evaluate the relationship between the variables. P-value less than 0.05 was considered significant.

Results: The results of this study showed that all kinds of injuries are seen more frequently in heavy sports, and those who have warm and wet temperament experience the most amount of injuries, and those with cold and wet temperament have less injuries during their lifetimes. Also, the results indicated that there is no significant relationship between the prevalence of sports injuries and athletes' temperament ($p \geq 0.05$)

Conclusion: Based on the characteristics and features of athletes, those with warm temperament are more desired to participate in sports activities and consequently, experience more sports injuries rather than the others with cold temperament. Cold-tempered people have some characteristics such as being weak and aimless and have less desire to participate in sports activities, therefore they are less exposed to sports injuries.

Keywords: Heavy sports, Light sports, Sports injuries, Temperament

HN10102500112

Effects of *Teucrium polium L.* extract and glibenclamide on diabetes-induced apoptosis in pancreatic

islets of rats

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Objectives: Protection against hypoglycemia after the diagnosis of diabetes is of paramount importance. In diabetes treatment, both herbal and chemical drugs are widely used. Previous studies have indicated that some medicinal herbs could improve or diminish the therapeutic effects of chemical drugs. This study aimed to investigate the protective effects of *Teucrium polium* L. extract and glibenclamide administration on diabetes-induced apoptosis in pancreatic islets of rats.

Materials and Methods: In this study, 48 male Wistar rats were divided into 6 groups of 8, including the control (C), sham control (SH), STZ-induced diabetes (D), STZ-induced diabetes receiving *Teucrium polium* L. extract (200 mg/kg) (TP), STZ-induced diabetes receiving glibenclamide (5 mg/kg) (G), and STZ-induced diabetes receiving glibenclamide-*Teucrium polium* L. extract (TP+G). Diabetes was induced via the intraperitoneal injection of STZ (55 mg/kg), and the treatment was performed during 6 weeks. At the beginning, middle and end of treatment, blood samples were obtained and plasma glucose was measured regularly. Moreover, animals were anesthetized at the end of the treatment, and their pancreases were dissected and processed for the TUNEL assay. TUNEL-positive cells in pancreatic islets were counted and compared between the groups.

Results: In this study, *Teucrium polium* L. extract and glibenclamide increased body weight and reduced plasma glucose and number of apoptotic cells significantly, while the simultaneous administration of these two agents had no significant effects on the aforementioned parameters.

Conclusion: According to the results of this study, simultaneous application of *Teucrium polium* L. extract and glibenclamide had no significant difference with the independent administration of each of these compounds.

Keywords: Diabetes, *Teucrium polium*, Glibenclamide, Pancreas, Apoptosis

HN10101920178

A SWOT-based futuristic study on personal experiences about different complementary medicine treatments, based on disc behavioral model

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Objectives: Personal experiences play a major role in the endorsement of different alternative treatments and recommendation of these methods to others. In this futuristic research by applying SWOT analysis, personal experiences about different complementary medicine treatments were evaluated, based on DISC behavioral model.

Materials and Methods: In this SWOT-based analysis, personal experiences about different complementary medicine techniques were assessed, based on DISC behavioral model, which includes identification of strengths/weaknesses (internal factors) and opportunities/threats (external factors). The results were presented in tables indicating the analysis of internal and external factors. The results of the final analysis were presented as matrix tables for further analysis.

Results: To precisely pinpoint the weaknesses, strengths, opportunities and threats of using complementary therapies (based on behavioral DISC model), the cause and effect analysis revealed that only the benefits of therapy are discussed and the possible clinical complications may be disregarded, given the sense of confidence and motivation, promoted by personal experiences with complementary medicine treatments.

Conclusion: Overall, personal experiences about different complementary therapies cannot be generalized. Also, these findings were in conflict with the basic principles of scientific methods.

Keywords: Complementary medicine, DISC behavioral model, Futuristic study, Personal

experiences, SWOT analysis

HN10101370385

Evaluation of the effects of *Teucrium polium* L. on the renal function of rats

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Objectives: This study aimed to evaluate the nephrotoxicity caused by the hydro-alcoholic extract of *Teucrium polium* on the renal function of male Wistar rats.

Materials and Methods: In this experimental study, 100 rats were divided into 10 groups of 10. In five groups, herbal extract (50, 100, 150 and 200 mg/kg) and normal saline were injected intraperitoneally for 28 days. Animals were killed at the end of the intervention to evaluate renal degenerations. In addition, other groups received the same drug regimen and were killed 28 days after the cessation of drug injections to investigate possible complications or regenerations during recovery.

Results: Hydro-alcoholic extract of *Teucrium polium* had dose-dependent toxic effects on the renal function of the studied animals ($p=0.02$). After 28 days of *Teucrium polium* administration (Phase 1), renal damages did not increase in the subjects receiving the herbal extract compared to the control group ($p>0.05$). However, after 28 days of drug cessation, renal damages, such as degeneration, destruction and vacuolization, were more significant among the animals receiving increased doses of the herbal extract compared to the control group ($p=0.03$).

Conclusion: According to the results of this study, *Teucrium polium* must be used with great caution due to its significant nephrotoxicity.

Keywords: Tubular cells, *Teucrium polium*, Nephrotoxicity

HN10104661027

Matching method of liver diseases in traditional and modern medicine

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Objectives: One of the concerns of practitioners of traditional medicine and modern medicine specialists is matching diseases in the two medicines in order to use the prescribed treatments on a volunteer. This study was conducted to match Liver diseases in Iranian traditional medicine and modern medicine.

Materials and Methods: This study identified then studied, illustrated the relation between diseases and eventually summarized all liver diseases in ten original books of Persian traditional medicine including the Canon of medicine, Zakhireye Khwarazmshahi, Kaamel Al-Sinaa, Al-havi and the Great Elixir. Then the illustrated chart was compared with the general chart of relationship between liver diseases in modern medicine.

Conclusion: Based on the conducted comparison, the primary liver diseases such as hepatitis and alcoholic and non-alcoholic liver diseases are classified as primary and initial liver diseases, called adverse temperaments. In traditional medicine, the liver disease spectrum culminates in edema. Hydrocephalous symptoms resemble cirrhotic ascites. Given the difference in attitudes toward diseases and different classifications in traditional and modern medicines, it seems that disease in modern medicine, in its different stages, equals various diseases in traditional medicine. Therefore, in order to match liver diseases, it is suggested that the symptoms of a liver disease in modern medicine, at a certain acute or chronic stage, be compared with various disease symptoms in traditional medicine. Thus, one disease in modern medicine would possibly equal many diseases in traditional medicine.

Keywords: Traditional medicine, Liver, Disease, Adaptation

HN10109301070

Antimicrobial efficiency of Iranian

Ziziphora clinopodioides essential oil on preservation of hamburger

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Objectives: In this study, the chemical composition and antimicrobial activity of Ziziphora clinopodioides essential oil and its potential application as a natural preservative in reducing the indigenous microbial population of hamburger were investigated.

Materials and Methods: Essential oil of Ziziphora clinopodioides, cultivated in Iran, was obtained through hydro-distillation method. Chemical composition of the oil was determined using gas chromatography-mass spectrometry analysis. Antimicrobial activity of the essential oil was checked against Staphylococcus aureus, Escherichia coli, Bacillus subtilis, Salmonella typhi, Listeria monocytogenes and Pseudomonas aeruginosa, using agar dilution method and minimum inhibitory concentration (MIC). Then, values of each active oil concentration were determined and its potential application was investigated as a natural preservative in reducing the indigenous microbial population of hamburger were investigated.

Results: The major components were carvacrol (54.31%), thymol (12.51%), octadecane (9.51%) and pulegone (4.88%). The results showed a significant activity against the tested strains (gram-positive and gram-negative bacteria). Adding essential oil to concentrations higher than MIC values reduced the microbial population of hamburgers stored at 25°C, 4°C and -12°C.

Conclusion: This study showed that the Ziziphora clinopodioides essential oil could be added to the ingredients of foods as a natural antibacterial agent.

Keywords: Essential oil, Hamburger, MIC, Ziziphora clinopodioides

HN10109301073

Isolation of Listeria Monocytogenes in animal products and evaluation of the presence of Prf A gene in bacteria isolated from food samples

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Objectives: Listeria is a gram-positive bacterium and a facultative intracellular pathogen. Prf A is an important gene in the virulence of this bacterium. This study aimed to determine the presence of Listeria monocytogenes in animal products and evaluate the presence of Prf A gene isolated from food samples collected from different areas of Qazvin province, Iran.

Materials and Methods: This cross-sectional study was conducted on 182 food samples collected from different cities of Iran in 2014. Listeria monocytogenes was isolated based on the cold enrichment method, and prf A gene was analyzed using polymerase chain reaction (PCR) method. Data analysis was performed in SPSS.

Results: In this study, 37 food samples (20.3%) were positive for Listeria spp. Strains of Listeria monocytogenes, L. innocua, L. welshimeri, L. seeligeri and L. grayi were observed in 21 (56.8%), 7 (18.9%), 4 (10.8%), 3 (8.1%) and 2 isolates (5.4%), respectively. Moreover, none of the isolates had L. Ivanovii. Prf A gene was detected in all the isolates of Listeria monocytogenes.

Conclusion: According to the results of this study, L. monocytogenes and Prf A gene are commonly present in food products. Therefore, preventive strategies should be planned in this regard.

Keywords: Listeria monocytogenes, Prf A gene, PCR, Food samples

HN10102820127

A comparative study on ichthyosis vulgaris disease and its therapeutic strategies in traditional medicine

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Objectives: Skin is the biggest organ of the body with an approximate surface of 2m² and weight of 4kg. This organ is the first defensive barrier against environmental stressors. Having a healthy skin is very important in the health of human beings. Therefore, treating skin diseases is of great importance. The purpose of this study is to evaluate and compare the clinical symptoms of ichthyosis vulgaris disease with other skin diseases available in the traditional medicine literature, and to use the traditional medicine methods for curing this disease.

Materials and Methods: This library-based review was done on the Iranian traditional medicine resources such as “Canon of medicine”, “Kamel Sanaeh”, “Sharhol Asbab”, “Tebbe Akbari” and “Eksire Aazam”.

Results: Ichthyosis vulgaris, known as fish scales disease, is a skin disorder in which the dead cells accumulate on the patients' skin, forming thick scales. According to the reviewed resources, clinical symptoms of this disease are almost like the symptoms of “Black Baras” or *jozam*. Considering the shape and shelling appearance of the skin and the color of wastes, we can say that “Black Baras” is similar to ichthyosis vulgaris. Treatment methods of Iranian traditional medicine for curing black leprosy are temperament correction, preventing mucus production, using oral drugs and after that using local drugs.

Conclusion: To improve life quality, we can develop effective methods with few side effects for treating skin diseases cited in traditional medicine literature through identifying and comparing them to the modern diseases.

Keywords: Black Baras, Ichthyosis vulgaris, Traditional medicine

HN10101750115

The effect of life style on healthy skin from traditional Iranian medicine (TIM) perspective as compared to

modern medicine

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Objectives: Skin is the largest organ protecting body against internal and external stressors as a mechanical and immunological barrier. Although most of the dermatological problems are not life threatening, their high costs of treatment and consequences on people's quality of life necessitate their prevention. Traditional Iranian Medicine (TIM) has a preventive approach towards all diseases, as well as noting their treatment. The aim of this study is to determine the effect of life style intervention on skin health.

Materials and Methods: This review article was performed to discuss the effect of six essentials of life style intervention on the skin. Therefore, Persian medical manuscripts like *Canon*, *Kamel-o-sanae* were investigated and analyzed and compared to the extracted data from PubMed database.

Results: The priority of TIM is to prevent illnesses rather than the treating them. This prevention is based on management of people's life style including: air and water, food and drinks, bodily movement, sleep and wakefulness, evacuation, retention and emotion. When it comes to disease treatment these six essentials are considered as the first step before starting herbal therapy and manipulation. Among them, the effects of air pollution and insomnia on the skin aging in allopathic studies have been considered. Also, in modern medicine sweating is noted as a way of the prevention of acne, likewise TIM considers sweating as a way of evacuation and thereupon, supporting skin health.

Conclusion: According to the TIM studies, the six essentials of life style can play a fundamental role in keeping skin healthy, which has been discussed in allopathy, as well.

Keywords: Acne, Life style, TIM, Skin aging

HN10101370389

Effects of royal jelly on the growth of WEHI-164 fibrosarcoma cells in

syngenic Balb/c mice

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Objectives: Royal jelly is a substance that appears to be effective on the immune system and it appears to be effective on both prevention and growth of cancer cells. In this study, we aimed to investigate the effect of royal jelly on the growth of WEHI-164 fibrosarcoma cells in syngenic Balb/c mice.

Materials and Methods: In an experimental study, 28 male Balb/c mice were designated into four identical groups. The mice were subcutaneously injected with 5×10^5 WEHI-164 tumor cells on day zero in the chest area. Animals in groups 1 to 4 were orally given 100, 200, 300 mg/kg of royal jelly or vehicle, respectively. In every individual mouse, the tumor size was measured every 2 days from day 5 (days 5, 7, 9, 11, 13, 15, and 17). Data were statistically analyzed using Kruskal-Wallis and Mann Whitney-U tests.

Results: Our results showed that the mean size of tumors in the case group was significantly smaller than the control group in days 11, 13, 15 and 17 ($p < 0.05$). No metastasis was seen in test and control groups.

Conclusion: Our study with emphasize on antitumor effects of royal jelly, reveals that royal jelly has an important role in control and regression of fibrosarcoma cells. Since royal jelly showed a delayed effect in control of fibrosarcoma, we suggest that royal jelly be used for at least 10 days before tumor inoculation.

Keywords: Balb/c mice, Fibrosarcoma, Royal jelly

HN10105860459

Investigation of the effect of simulated day/night model on weight gain and hospital discharge of preterm babies

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Objectives: Considering the high mortality rate of preterm babies and efforts to reduce it, this study examines the effects of simulated day/night model on weight gain and acceleration of preterm babies' discharge.

Materials and Methods: This study was a clinical trial (IRCT: IRCT2015060722583N1) in which 60 preterm babies admitted to the neonatal intensive care unit of Bentolhoda hospital, Bojnord, Iran, in 2012 were randomly stratified into two groups ($n = 30$) of exposure (12 hours in darkness and 12 hours in light) and control (continuously in light). The information related to weight gain, amount of sleep, milk feeding and duration of hospitalization were collected and then analyzed using SPSS statistical software (ver. 18) and the independent t-test.

Results: Mean weight gain was 263 grams in the intervention group and 232 g in the control group ($p = 0.02$). The mean duration of hospitalization in the intervention group was 9.1 days and in the control group it was 10.6 days ($p = 0.03$); mean sleep duration in the intervention group was 18.3 h and in the control group it was 17.03 h ($p = 0.02$). These differences in the two groups were statistically significant. The mean duration of milk feeding showed no significant difference in intervention and control groups.

Conclusion: The findings of the study showed that babies exposed to day and night conditions had better weight gain and shorter hospital stay than the infants exposed to constant light.

Keywords: Simulation of night and day, Infants, Preterm, Weight

HN10100530025

Immunostimulatory effect of Ziziphora tenuior extracts on

peritoneal macrophages from Balb/c mice

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Objectives: Macrophages have an important role in host defense against fungal infections such as candidiasis. Active components such as polysaccharides, lectins, proteins, and peptides present in plants have been shown to stimulate the immune system. The aim of this study was to investigate the immunostimulatory effects of water, ethanol and acetone extracts of *Ziziphora tenuior* (*Z. tenuior*) on murine peritoneal macrophages.

Materials and Methods: The different extracts of *Z. tenuior* plant, collected from Zanjan province, were obtained with sterile water, 80% ethanol and 100% acetone solvents. Murine peritoneal macrophages were treated with different concentrations of *Z. tenuior* extracts. The viability of macrophages and nitric oxide (NO) production were evaluated using MTT assay and the Griess method, respectively. In addition, the reactive oxygen species (ROS) production and fungicidal activity against *Candida albicans* were evaluated by NBT assay and killing method, respectively.

Results: A significant increase in the viability of macrophages was observed with water extract of *Z. tenuior* at the concentrations of 10 and 20 mg/ml ($p < 0.05$). Moreover, this extract showed a significant inducing effect on the levels of ROS and a strong fungicidal activity against *C. albicans* by treated macrophages at concentrations of 10 and 20 mg/ml ($p < 0.05$). There were no significant differences between different extract groups and the control group in NO production.

Conclusion: The results demonstrated significant immunostimulatory activity of *Z. tenuior* extracts in MTT, NBT and killing assays against *C. albicans*. To clarify the exact mechanisms of this activity, more studies should be performed with isolated immunostimulatory components.

Keywords: Immunostimulatory activity, *Ziziphora tenuior*, MTT assay, NBT assay, *Candida albicans*

HN10107490846

The effects of magnolia on oral health

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Objectives: Recently, herbal medicines have been commonly used for oral health, because of their antimicrobial, antifungal and anticancer properties and few side effects. Magnolia is one of the herbs that has numerous applications in traditional and herbal medicine. Magnolia is in the group of polyphenols. Polyphenols are one of the most common compounds found in herbs. Polyphenolic compounds have a wide range of biological activities, many of which are relevant to their conventional antioxidant actions. However, their potential in preventing oral diseases is highlighted with scientific developments in this field.

Materials and Methods: In this study, we used the reliable scientific websites such as PubMed, Scopus, and evaluated the scientific articles on the medicinal features of Magnolia. Out of 28 articles, 12 articles related to the antidisease effects of polyphenol compounds for mouth and teeth, were evaluated.

Results: Analysis of the results from different studies supported the antibacterial role of Magnolia on dental caries caused by Streptococcus. The effect mechanisms on bacteria include: a direct effect against Streptococcus mutans, interacting with microbial membrane proteins and inhibition of cell adhesion of bacteria to the tooth surface, inhibiting glycosylation of transferase and amylase. However, further research and clinical evidence are needed to determine the clinical efficacy of this plant on dental diseases.

Keywords: Magnolia, Oral health, Polyphenol compounds

HN10107970807

Developing a drug-based form of ginger rhizomes according to Iranian traditional medicine to relieve nausea caused by chemotherapy

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Objectives: Ginger rhizomes (*Zingiber officinale* Roscoe) is of Zingiberaceae family, which is used in most parts of the world to cure various disorders such as digestive disorders and inflammatory conditions such as osteoarthritis. Gingerols which are more in the fresh rhizome and Shogaols that are mostly seen in dry rhizomes are some compounds of ginger with anti-nausea effects. The purpose of this study is to design a new formula of ginger, based on Iranian medicine, to be used in patients suffering from nausea caused by chemotherapy with standardizing the product based on the 6-gingerols and expiration date determination.

Materials and Methods: In November 2010, about 20 kilograms of fresh ginger rhizomes were purchased and after approving the scientific name and drying in laboratory temperature, its dried powder was obtained. Extraction was done by means of maceration method with ethanol, and 100 gr oily extract was produced. The typical zero number capsule was used. Compounds were mixed based on the formula, and then put into a capsule. Stability tests were conducted at the set times.

Results: The amount of 6-Gingerol in the extract was 14% in 500mg capsules in January 2012, which is equal to 1.27 mg, and in April 2013 it was 0.7 mg.

Conclusion: The results show that the product was not stable in exacerbated temperature conditions,

and we cannot assign an expiration date for this product.

Keywords: Ginger, Nausea of chemotherapy, Quince fruit, 6-gingerol, 6-shogaol

HN10106300507

Effects of Swedish massage therapy on glycosylated hemoglobin (A1C) in diabetic patients

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Objectives: Changes in lifestyle, increased life expectancy, high levels of stress, lack of physical activity and changes in dietary patterns have led to the increased prevalence of diabetes in different populations. Given the severe complications of this disease and heavy treatment costs, importance of prevention, control and treatment of diabetes should be highlighted. Nowadays, non-drug treatments, medication therapy and surgery are considered as the main treatment procedures for diabetes. In this regard, Sokullu, Mac Lowry and Chitlin (1999) state that basic measures, such as diet, exercise, weight loss in obese individuals, relaxation techniques and modification of lifestyle might be neglected in the treatment of diabetic patients. Relaxation techniques play a pivotal role in the improvement of diabetes, and Swedish massage is one of these techniques. This study aimed to investigate the effects of Swedish massage therapy on glycosylated hemoglobin (A1C) of diabetic patients referring to 9-Dey Hospital in Torbat-e Heydarieh city, Iran.

Materials and Methods: This experimental study was conducted at 9-Dey Hospital in 2010 on 60 diabetic patients randomly divided into two groups of experiment and control. Data were collected using demographic questionnaires, meters and scales. Swedish massage therapy was performed on the subjects of the experimental group 15 minutes per day, 3 times a week, for 12 weeks (36 sessions). A1C was measured in each group before and after the intervention.

Results: In this study, there was a significant difference in the A1C of the experimental group

before and after the intervention ($p < 0.05$). However, no significant differences were observed in the A1C of the control group before and after the intervention ($p > 0.05$).

Conclusion: According to the results of this study, Swedish massage therapy is effective in the reduction of glycosylated hemoglobin in diabetic patients, and it is recommended that this complementary method be used in the control and treatment of diabetes.

Keywords: Swedish massage, Diabetes, Glycosylated hemoglobin

HN10108630976

The efficacy of play therapy through chess exercises for executive functions of brains of students with mathematical learning disorders

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Objectives: The new executive functions of the brain approach and empowering these functions through education and complementary treatments like play-therapy and music-therapy can be promising for curing a lot of disorders such as attention deficit hyperactivity and learning disorders, and even depression. The present study aimed to evaluate the efficacy of chess practice for executive functions of students with mathematical learning disorders.

Materials and Methods: In the present quasi-experimental research 20, fourth and fifth grade students with mathematical learning disorders were chosen by convenience sampling (clients of the Learning Disorders Center of Ilam) in the 1392-1393 (2013-2014) academic year. Then, they were randomly divided into control and experimental groups.

All participants were evaluated by executive functions tests: Tower of London (Morris, Stead, Ahmad, Tone, 1993), continuous performance (Rosvold, Mirski, Sarason, Branson, and Beck, 1965), Stroop cards (Stroop, 1935), and Kay-Mat mathematical test (Connolly, 1988). Afterwards, the experimental group participated in chess classes for one year (two, one-hour sessions per week). Upon completion, the executive functions of all participants were assessed again. After a two-month interval, the follow-up test was also performed.

Results: The pre-test and post-test results were analyzed using the dependent t-test, and a significant difference between the pre-test and post-test scores was observed.

Conclusion: Based on the results of this study, chess practice improves the executive functions of the brain. These findings can be applied in neurological interventions, education and treatment.

Keywords: Executive functions, Chess practice, Mathematical learning disorders

HN10104640553

A review on treatment of oligomenorrhea based on Persian medicine

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Objectives: Oligomenorrhea is the most common menstrual disorder, defined as the prolongation of menstrual interval. Various factors, including endocrine and systemic causes and emotional, nutritional and physical stressors affect this disorder. Nowadays, this disorder is more prevalent due to change in lifestyle. Also, its complications, including abnormal uterine bleeding, infertility, hirsutism and psycho-social consequences resulting from them, reduce the quality of life for girls and young women of reproductive age and increase the burden of disease. The treatment of oligomenorrhea is mainly based on hormone therapy.

Materials and Methods: In this review, the main texts of Persian medicine were investigated, using words associated with oligomenorrhea.

Results: In Persian medicine, oligomenorrhea is referred to as “Ehtebastams”. Treatment is based on the etiology and semiology, and accordingly different treatment strategies have been proposed. In this medical system, the principles of treatment are lifestyle modification, nutrition and sleep pattern improvement, exercise, and bathing. In addition, numerous medicinal herbs are presented as »Moderheyz« (or »Modertams« (emmenagogue), which generally have warm temperament and often are Mosakhen (warmer), Molattef (softener), Mofatteh (dilator), or Moraqeq (diluent) and can be used alone or combined in various forms. In some cases cupping and phlebotomy are recommended as a treatment method as well.

Conclusion: It is necessary to carry out clinical trials to evaluate the therapeutic approach of Persian medicine in oligomenorrhea.

Keywords: Persian medicine, Oligomenorrhea, Treatment

HN10101971052

The effects of traditional and complementary medicine on health network systems

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Objective: Complementary medicine has been applied for years for the treatment of various diseases. Complementary medicine, also known as natural medicine, alternative medicine and non-conventional medicine, has been defined by World Health Organization in 1977 as a group of practical and theoretical sciences used in the diagnosis, prevention and treatment of physical, mental or social disorders, transferred orally or in writing from one generation to another.

Materials and Methods: In the present study, major resources of traditional medicine such as the “Canon of Medicine” by Avicenna and “Al-Iqraz al-Tebbieh” by Zayn al-Din Jorjani were used. In order to have access to more recent articles and resources, IranMedex, Scopus, SID and PubMed databases were searched, using the following keywords: “traditional medicine”, “complementary medicine” and “health network system”.

Results: Following the national commitment to traditional medicine in China in 1949, establishment of the Academy of Traditional Chinese Medicine in 1951 and widespread western propaganda against the use of traditional strategies, now traditional Chinese medicine is responsible for 40% of healthcare services in the country. China has 30 traditional medicine universities and 170 traditional medicine research centers. Traditional Chinese healthcare system includes 525,000 physicians, 83,000 pharmacists, 2,500 hospitals and 3,500 beds. Traditional medicine in Vietnam was officially established by the government in 1955 and today, the system is comprised of 25,500 physicians, 49 hospitals and three research institutions. In Uganda, India and Ethiopia, the role of traditional medicine in primary healthcare services is 60%, 70% and 90%, respectively. In Malaysia, \$500 million is spent on traditional and complementary medicine, while the cost of modern medicine is estimated at \$300 million. In the majority of developed countries, traditional and complementary medicine has been accepted by a large number of community members. According to statistics, 48% of Australians, 70% of Canadians, 42% of Americans, 38% of Belgians and 75% of the French have at least once benefited from complementary medicine services within a year. In Iran, the exact statistics on the use of traditional and complementary medicine and different schools of complementary medicine have not been yet determined. However, a study conducted in Isfahan in 2000 showed that 5.62% of people had at least once used alternative treatment methods. According to the findings, use of medicinal plants (6.76%), praying (1.10%), cupping (5.9%) and acupuncture (5.5%) is more prevalent than other treatment methods.

Conclusion: Traditional medicine was well accepted as a healthcare system by the people back in time. Traditional medicine has special advantages over all imported healthcare systems, since it is part of the public culture and plays

a significant role in addressing some cultural issues of health. Traditional medicine could easily support medical and scientific fields. By introduction, development and promotion of traditional medicine, we can respect the culture and heritage of people around the world.

Keywords: Complementary medicine, Healthcare system, Traditional medicine

HN10107390791

Different types of water in traditional Iranian medicine and modern medicine

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Objectives: In traditional Iranian medicine (TIM), water is one of the four major elements of the universe. Three functions have been introduced for water including moisturizing the body, cooling the body and facilitating digestion. Considering the importance of this subject, we aimed to investigate different types of drinking water from the perspective of TIM and modern medicine.

Materials and Methods: In this review study, we investigated several types of drinking water and water purification methods, based on TIM literature and multiple electronic databases.

Results: From the perspective of TIM scholars, drinking water can be divided into four types including rain water, running water (i.e., springs and rivers), stagnant water (e.g., water wells, subterranean canals and drains) and mineral

water. Lightness, transparency and purity are the important characteristics of healthy drinking water. Therefore, rain water and spring water are the most suitable options for drinking. According to TIM literature, water can be refined via various methods such as boiling, use of clay pots and filtering by a wool cloth. In recent studies, based on the amount of calcium and magnesium in water, two types of light and heavy water have been introduced. Presence of irons such as nitrate and sulphate in water is toxic and indicative of water pollution. According to the above-mentioned points, water purification is of grave significance.

Conclusion: In TIM, boiling water is one of the most simple methods for water purification. Further laboratory research is suggested to evaluate the efficacy and potency of other purification methods in TIM.

Keywords: Drinking water, Modern medicine, Traditional Iranian medicine

HN10101740055

An investigation of propolis in the treatment and prevention of radiation-induced Mucositis in head and neck cancers

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Objectives: Mucositis is an acute side-effect of radiotherapy, causing ulcers of the oral mucosa, pain and discomfort in patients. Propolis is a resinous substance and a rich natural resource of flavonoids, made by bees. It possesses anti-ulcer, anti-bacterial, anti-fungal, anti-oxidant and tissue-repairing properties. Use of this odorless, cost-effective substance without any unpleasant flavor, could be useful in the treatment of patients undergoing radiotherapy.

Materials and Methods: This double-blinded clinical trial was conducted at the Cancer Center of Omid Hospital, affiliated to Mashhad University of Medical Sciences. Overall, 20 patients undergoing radiotherapy were randomly selected. The subjects used a mouthwash containing propolis extracts on a daily basis. Afterwards, propolis extracts were swallowed three times a day from a week before to the end of radiation therapy. In the control group, 20 patients received placebo mouthwash. The index by the National Cancer Institute was used regarding the most common complications of oral mucositis. To assess xerostomia, five standard questions, used in previous studies, were asked from the participants. For data analysis, t-test, Mann-Whitney and Friedman's Chi-square were performed.

Results: The Mucositis severity was lower in the propolis group, compared to the control group. However, xerostomia was not significantly different between the two groups ($p < 0.1$).

Conclusion: This pilot study showed that mouth rinse with propolis is useful for the prevention and treatment of radiation-induced mucositis.

Keywords: Propolis, Mucositis, Radiation, Cancer

HN10107720735

EEG-guided meditative training through geometrical approach: an interim analysis

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Objectives: Other than earlier established meditation methods, Farshad's geometric meditation (FG meditation) is an innovative meditation method in which, attention is focused upon geometric shapes and routes superposing different parts of our body and moved through inhalation and exhalation. The anecdotal effects of FG meditation prompted us to assess its physiological relaxation response in a case study through polygraphy, using a digital sampling unit.

Materials and Methods: Two FG meditation trainers with over six months of experience were enrolled to practice four techniques from the FGM method. A six-channel EEG (F3-A2, F4-A1, P3-A2 and P4-A1) montage, galvanic skin conductance (GSC), heart rate variability (HRV) and pulse-oximetry probes (Vilistus DSU, UK) were applied for real-time recording while subjects were going through five training phases in each technique. Those phases comprised the pre-test, pre technique, core technique, post-technique and post-test. Fast Fourier transform in MATLAB was employed for signal processing.

Results: Analyses of the physiological recordings revealed theta/beta ratio, overall dominant frequency, theta amplitude, mean HRV, SaPO₂ and GCS of 0.96, 3Hz, 5.42 μ v, 53.63, 94% and 6.91 μ v versus 0.02, 16 Hz, 0.02 μ v, 25.42, 92% and 6.98 μ v in core technique versus pre-test phases of all FG meditation techniques trainings, respectively. Considering the abundance of theta-range frequencies in real-time processing, trainers were allowed more time to remain in deep-down state for more profound meditative experience.

Conclusion: Our preliminary data suggested a pronounced deep-down relaxation response in FG meditation, as compared to the control condition. Our pilot trial and subsequent randomized clinical setup are expected to shed further light on the efficacy of FG meditation as a possibly preferred method in reducing stress response.

Keywords: EEG, FG meditation, Physiological recording, Relaxation response

HN10106430540

Comparison of the applications of massage therapy in the traditional and modern medicine

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Objectives: Massage therapy is a common complementary treatment method widely used around the world. In references of traditional medicine, Iranian scholars refer to massage therapy as “Dalak”, associating this method with advantages such as ridding the body of voyeur and increasing visceral heat. This study aimed to compare the functions of massage therapy between Iranian traditional medicine and modern medicine.

Materials and Methods: This study was performed via reviewing the literature of Iranian traditional medicine about the applications of massage therapy. In addition, functions of massage therapy in modern medicine were searched in electrical databases, and the results were compared between these two sources.

Results: In the Iranian traditional medicine, massage therapy was commonly used for the treatment of persistent headaches, dizziness, diarrhea, nightmares, shivering, numbness of limbs, loss of appetite, excessive weight loss, poor digestion, joint pains and shortness of breath. As for modern medicine, the most frequent applications of massage therapy were to reduce chronic pains, labor pain and delivery time in pregnant women, anxiety, sleep disorders, improving growth in children, as well as the treatment of neonatal jaundice, apnea, colic, asthma, irritable bowel

syndrome and hypertension.

Conclusion: According to the results of this study and former clinical trials about massage therapy, this method is commonly used for the treatment of chronic pains, headaches, insomnia and improving the growth of body organs. However, in cases such as the treatment of shivering and loss of appetite, which have been mentioned in the manuscripts of Iranian traditional medicine, no clinical trials have been conducted in modern medicine. Therefore, it is recommended that more clinical trials be performed as to discover other clinical applications of massage therapy in the Iranian traditional medicine.

Keywords: Dalak, Massage, Iranian traditional medicine

HN10101180061

Effects of progressive muscle relaxation on the quality of life of patients with rheumatoid arthritis

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Objectives: Rheumatoid arthritis (RA) is a chronic disease with adverse effects on the quality of life due to its chronic, painful and debilitating nature. This study aimed to determine the effects of progressive muscle relaxation on the quality of life in RA patients.

Materials and Methods: This clinical trial was conducted in a rheumatologist office on 62 RA patients. Subjects were randomly divided into two groups of progressive muscle relaxation and control. Subjects in the experimental group exercised 20 minutes daily for eight weeks, while no intervention was made in the control group. Data collection was performed using demographic and SF-36 questionnaires at the beginning and end of the intervention. Data analysis was performed using SPSS V.19.

Results: In this study, mean of quality of life score in the experimental group changed from 37.84 to 54.54 after the intervention ($p < 0.000$), while it changed from 37.47 to 43.20 in the control group. Therefore, the difference was not

considered as significant ($p=0.112$). Moreover, there was a significant difference between the groups regarding the six aspects of quality of life, including physical function ($p=0.041$), vitality ($p=0.029$), social function ($p=0.017$), mental health ($p=0.001$), general health ($p=0.002$) and psychological health ($p=0.002$). However, there was no significant difference in physical pain ($p=0.149$) and physical constraint ($p=0.082$).

Conclusion: According to the results of this study, progressive muscle relaxation training could be an effective therapeutic method to improve quality of life in RA patients.

Keywords: Rheumatoid arthritis, Quality of life, Progressive muscle relaxation

HN10108891005

Complementary medicine for children in the legal perspective

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Objectives: Increasing use of complementary therapies, such as chiropractic, massage therapy and herbal medications, has encouraged the implementation of these methods in children. However, inappropriate use of complementary approaches could lead to direct damages (e.g., toxic effects, malnutrition and postponement of necessary drugs) or indirect damage (e.g., financial and emotional burdens) in children. This study aimed to evaluate the function of proper clinical complementary medicine in children.

Materials and Methods: Literature search was conducted using key words such as complementary medicine, alternative medicine, children and law in different databases including Blackwell, ScienceDirect and Google.

Results: According to the search results, there are reports about the damages caused by the improper use of complementary medicine in children, such as multiple organ failure after pennyroyal administration, quadriplegia after manipulated massage therapy and

deterioration of infant botulism after using chamomile. Therefore, health care staff needs to offer consultations about the advantages of complementary treatments in children in order to control and manage the possible consequences that risk the rights of these patients. The following questions could be addressed in the proposition of a framework in this regard:

1. Do parents choose complementary methods merely to disregard effective cares when the child's life is at risk?
2. Is the use of complementary medicine for children in contrast with common and necessary treatments?
3. Is there proper consent regarding the implementation of complementary treatment?
4. Is the ratio of potential risks to the advantages of complementary medicine acceptable?

These questions could be beneficial for the medical staff in the provision of proper clinical care, as well as the fulfillment of moral responsibilities.

Conclusion: According to the results of this study, consultation and cooperation with therapists and medical staff using complementary medicine seem necessary to reduce malpractice and protect the rights of children.

Keywords: Children, Complementary Medicine, legal

HN10107430685

A macroscopic examination of urine in traditional medicine compared to the microscopic examination in conventional medicine

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Objectives: Microscopic examination of urine provides information about urinary system diseases and systemic diseases changing the urine composition. While it seems that evaluating the microscopic features of a urine sample can provide physicians with more information about the incidents in patients' body, this study aims to extract important features of macroscopic urine that

have diagnostic importance in traditional medicine.

Materials and Methods: The latest findings regarding microscopic analysis of urine were initially extracted from reliable websites including PubMed, Google scholar, Science Direct. Then, the information related to urine macroscopic features were taken from traditional medicine references, such as “The Canon of Medicine” and “Mofareh-al-Gholoob”. Subsequently, the findings were selected, compared and analyzed.

Results: The findings show that the range of colors (i.e., black, white, green, red, yellow), density or dilution (the speed of liquids), opacity or clarity, the amount of penetration of light beams, the existence of bubbles in urine and sediment properties are important factors that are not emphasized during the analysis of urine samples these days. While, these items are of great importance in the traditional medicine for diagnosing diseases such as dystemperaments, poor digestion and liver diseases.

Conclusion: Paying more attention to the forgotten features of urine samples, which can help physicians with giving a more accurate diagnosis can provide a better treatment. Moreover, it can lower the treatment costs, which adds up to the patients satisfaction regarding the health care services.

Keywords: Analysis, Microscopic, Traditional medicine, Urine, Macroscopic.

HN10105090675

The effects of hygiene on the symptoms of gastroesophageal reflux disease in adults

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Objectives: Gastroesophageal reflux disease (GERD) in adults is one of the most common disorders of the digestive system. Several factors such as diet and environmental and physiological factors affect this condition. The most usual treatment method for this disease is consumption of acid-suppressing agents, which leads to some complications such as digestive abnormalities, inflammations and infections in the long run. Traditional Iranian medicine has proposed effective approaches, also known as “hygiene principles”, to facilitate the correct way of living. The purpose of this study was to evaluate the effects of hygiene on the improvement of GERD in adults.

Materials and Methods: Hygiene methods for reflux (heartburn and acid reflux) were reviewed in some major resources of traditional Iranian medicine such as “Canon of Medicine”, “Akbari’s Medicine” and “The Greatest Elixir”, and hygiene guidelines were developed. The guidelines were explained to 31 patients with common symptoms of reflux, and then they were asked to follow the instructions for one month. The severity of symptoms was evaluated by the Frequency Scale for Symptoms of GERD (FSSG) questionnaire before and after the study.

Results: The total scores of the questionnaire were significantly different before and after the study and the reflux symptoms reduced in subjects.

Conclusion: GERD is a chronic disorder which does not require extensive treatment in most patients. Following hygiene instructions, along with modern treatment methods, can improve the symptoms of this disease.

Keywords: Gastroesophageal reflux disease, Heartburn, Acid reflux

HN10106030478

Effects of valerian extract on the anxiety of nurses at emergency departments

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Objectives: Valerian is an ancient medicinal herb with the scientific name of *Valeriana officinalis*, known for its soothing effects. Today, we are increasingly facing tension on a daily basis, especially at workplace, and some jobs involve high levels of stress, which negatively affect the health of individuals. This study aimed to evaluate the effects of valerian extract on anxiety among nurses.

Materials and Methods: This controlled clinical trial was conducted on 38 nurses with high levels of anxiety engaged at the emergency departments of different hospitals in Jahrom, Iran. Subjects were randomly divided into two groups of intervention and control. Oral capsules containing 530 mg of valerian root were prescribed for the intervention group two times daily for eight weeks, and placebo (similar capsules containing starch) was given to the control group. Data were collected using Beck Anxiety Inventory (1990). Data analysis was performed in SPSS V.19.

Results: After 8 weeks of intervention, level of anxiety reduced more significantly in the intervention group compared to the control group, and there was a significant difference in the anxiety score of both groups ($p < 0.001$).

Conclusion: According to the results of this study, valerian extract could be effective in reducing anxiety, and since this herb is associated with no side effects, it could be used as a complementary treatment for the reduction of anxiety in different individuals.

Keywords: Valerian, Anxiety, Nurses

HN10106010475

The effect of progressive muscle relaxation training on perceived stress of working women having psychosomatic symptoms

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Objectives: Stress is one of the main causes or intensifiers of psychosomatic disorders; we can easily reduce its negative effects using effective ways of coping. What matters most is having the ability to improve the stress coping method in a way that the effects of stressors are minimized. Therefore, this study aimed to evaluate the effect of progressive muscle relaxation training on perceived stress.

Materials and Methods: The present research is experimental and of pretest-posttest kind with a control group. The sample population consisted of 40 working women who referred to one of the consulting centers of Abadan with psychosomatic symptoms; they were randomly divided into two groups of control and test. The test group had 8 sessions of relaxation training in 4 consecutive days. The Perceived Stress Questionnaire (Cohen, 1983) was used to measure stress. Data was analyzed using SPSS (ver. 19) and covariance analysis.

Results: Findings showed that muscle relaxation training led to a decrease in perceived stress in the test group; the posttest difference between the two groups is significant ($p < 0.01$).

Conclusion: Relaxation as one of the stress control and management practices was effective in working women with psychosomatic symptoms. Therefore, it can be used as a non-drug, simple, and cost-effective complementary treatment method for decreasing stress.

Keywords: Muscle relaxation, Perceived stress, Psychosomatic symptoms

HN10105400494

Effects of therapeutic touch on anxiety in patients with cancer

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Objectives: Use of complementary and alternative medicine techniques is following a rising trend. The National Center for Complementary and Alternative Medicine categorizes therapeutic touch (TT) as a biofield energy therapy. The aim of this study was to assess the effects of TT on anxiety in patients with cancer.

Materials and Methods: The present clinical trial was conducted in 2015. Sixty male participants with cancer were randomly assigned into three groups: intervention group (n=20, 10-15 min of TT in seven sessions), placebo group (n=20, 10-15 min of simulated touch in seven sessions) and control group (n=20, routine therapy). The study tools included a demographic questionnaire and Zung Self-Rating Anxiety Scale, used to evaluate anxiety before and after four and seven sessions of intervention. For data analysis, descriptive statistics, ANOVA and Tukey's test were applied, using SPSS version 18.

Results: Data analysis showed a significant difference in anxiety scores before and after the intervention in the three groups ($p < 0.001$). The mean anxiety was not significantly different between the three groups before the intervention ($F=3.720$, $p=0.491$). However, there was a significant difference in mean anxiety between the groups after the fourth ($F=3.64$, $p=0.033$) and seventh sessions ($F=33.35$, $p=0.000$). According to Tukey's test, the intervention group was significantly different from the placebo and control groups ($p < 0.001$).

Conclusion: Based on the current findings, TT was shown to be a non-invasive intervention for improving anxiety in patients with cancer.

Keywords: Therapeutic touch, Anxiety, Cancer, Patient

HN10107080754

Traditional Persian medicine (TPM) approach to psoriasis treatment

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Objectives: Psoriasis is a chronic inflammatory skin disease with a recurrent nature. Treatment of this disorder takes long due to patients' non-compliance and its severe side effects. Traditional Persian medicine (TPM) is an ancient medical system dating back to 6000 years ago, originating from Persian regions, the most important of which was Iran. This research is designated to determine the treatments and natural remedies that ancient Iranian scientists have used to treat lesions described with symptoms close to common modern psoriasis. One of the complexities of using TPM known diseases is describing and finding the current medical problems in the traditional medicine manuscripts.

Materials and Methods: In this study, using TPM treatment books such as, Tebb-e- akbary, Exir-e-azam, Moalejat-e-Aghili and Alhavy, the symptoms of psoriasis were matched with diseases that were described with similar symptoms as psoriasis, such as Bahaq-e- asvad, baras-e- asvad, saafe, Guba. Search for herbal remedies was done using the keywords found in the main TPM manuscripts, especially in remedy (Mofradat) and treatment (Moalejat) TPM books. Herbs mentioned for different TPM keywords were investigated for effects on psoriasis. Searches were performed in the digital libraries and databases with the keywords

including “Psoriasis”, “keratinocytes”, “inflammation” and “Skin disorder” without time limit.

Results: According to Iranian humoral medical system, we introduced categorized lists of causes of diseases and the treatments used including mineral and herbal remedies and combinations used orally and topically and advises regarding lifestyle modification.

Keywords: Bahaq, Psoriasis, Quba, Traditional Persian medicine

HN10100070781

Effects of methanol extract and essential oil of *Nigella sativa* on ethylene glycol-induced kidney stones in rats

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Objectives: *Nigella sativa* is a rich source of antioxidants with several anti-inflammatory and prooxidant effects. This study aimed to investigate the effects of methanol extract and essential oil of *Nigella sativa* on kidney stones induced by ethylene glycol in rats.

Materials and Methods: In this study, 70 male Wistar rats were randomly divided into 7 groups of 10. During the study, distilled water (1%) was added to the water used by the control group (A), and rats in the negative control (B) and other groups received water with ethylene glycol (1%). Subjects in the prevention (C) and treatment groups (D) received the hydro-alcoholic extract of *Nigella sativa* daily since the start and 15th day of ethylene glycol prescription, respectively. In addition, prevention group (E) and treatment group (F) received essential oil of *Nigella sativa* (one ml) since the start and 15th day of prescription. Also, one ml of olive oil was administered to the animals in control group (G) since the first day of prescription.

Results: In this study, accumulations of calcium oxalate crystals significantly increased

in group B compared to group A. Moreover, accumulations of kidney and urinary tract stones significantly decreased in group C compared to group B. Biochemical serum and urine evaluations were indicative of a significant increase in the urinary oxalates of group B compared to group A, and a significant reduction in the number of oxalates in all the study groups, except for group E compared to group B.

Conclusion: According to the results of this study, alcoholic extract of *Nigella sativa* is more effective on the prevention of calcium oxalate crystal accumulations than urinary tract and kidney stone treatment. Administration of *Nigella sativa* extract combined with ethylene glycol since the first day yields better results compared to the administration of the herbal extract since the 14th day of prescription

Keywords: Calcium oxalate, Ethylene glycol, Kidney stones, Urinary tract stones, Rats, *Nigella sativa*

HN10107900776

The effect of ethanol extracts of damask rose (*rosa damascena mill*) on the contractile activities of ileum and its mechanism expression in rats

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Objectives: Diarrhea is an important cause of disease and death, especially in the third world countries. There are several drugs and mixtures with different mechanisms to cure diarrhea,

some of which have herbal origins. Damask rose is used in Iranian traditional medicine to cure gastrointestinal discomfort and diarrhea. Since there are no scientific studies on the anti-spasmodic effects of this herb, in this study we evaluate the anti-spasmodic effects of ethanol extract of Damask rose on Ileum contractions in Wistar rats. The mechanism expression of this extract was assessed, as well.

Materials and Methods: In this interventional study, 48 rats were randomly divided into 6 groups of eight. The control group, the group receiving the cumulative concentrations of damask rose extract, the group receiving propranolol, the group receiving Naloxone, the group receiving L-NAME and the group receiving calcium chloride. Ileum was incubated with beta-adrenergic (1 μ M propranolol), opioid (1 μ M Naloxone) receptor antagonists and Nitric oxide synthase inhibitor (100 μ M L-NAME), it was also under the influence of different doses of calcium chloride. The observed contractile effects were recorded with stability system. Then, the data were analyzed using repeated measures ANOVA and t-test.

Results: Cumulative extract of Damask rose (100, 500, and 1000 mg/kg) with a dose-dependent manner reduced Ileum contractions caused by Calcium Chloride (60mM) ($p < 0.0001$). Propranolol and Naloxone significantly reduced the inhibitory effect of the extract on the contractions induced by potassium chloride ($p < 0.001$), but L-NAME was ineffective. Also, Calcium led to the contraction of depolarized tissue caused by potassium chloride, and this contractile effect was significantly decreased by cumulative concentrations of the extract ($p < 0.001$).

Conclusion: The ethanol extract of Damask rose reduces the Ileum movements in rats by provoking beta-adrenergic, and opioid receptors, and voltage-dependent calcium channels, in a dose-dependent manner. This extract can be used in treating gastrointestinal disorders such as diarrhea and intestinal spasms.

Keywords: Damask rose, Diarrhea, Ileum, Rat

HN10104110255

A comparative study on the principles of cancer prevention between traditional Iranian medicine and classic medicine

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Objectives: Cancer with a rising prevalence is one of the three leading causes of mortality in most human communities. A significant part of health budgets in all countries is allocated to cancer treatment, promoting the global movement towards cancer prevention.

Materials and Methods: In this review article, the most recent reliable articles on cancer prevention and risk factors were searched in classic and traditional medicine literature.

Results: So far, many cancer-related risk factors have been identified and various preventive recommendations have been proposed by international organizations such as World Health Organization. Some of the most important risk factors for cancer include smoking and alcohol consumption, hyper-caloric and low-fiber diets, obesity, physical inactivity, environmental and industrial pollution, some viral infections and hereditary factors. The exact review of traditional Iranian-Islamic medicine resources showed that preventive rules, known as the six essential parameters [*Sitteh-e-Zarurieah*], have included all identified cancer-related risk factors. These preventive rules are air [*Hava*], body movement and repose, sleep and wakefulness, food and drink, evacuation and retention and mental movement and repose [*A'raz-e-Nafsani*]. The associated risk factors in classic medicine include smoking and air pollution, sedentary lifestyle, sleep disturbances, improper nutrition,

alcohol consumption, chronic constipation and psychoneurotic stressors, respectively. These rules are comprehensive enough to include many other harmful health-related factors, the role of which has been confirmed in the occurrence of different diseases except cancer.

Conclusion: As the results indicated, cancer prevention in Iran will be more successful if six essential rules of traditional Iranian-Islamic medicine are promoted among populations and health policymakers.

Keywords: Cancer, Comparative study, Prevention, Traditional medicine

HN10101190195

Study of the prevalence of musculoskeletal disorders in women and the importance of alternative therapies

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Objectives: In many societies, women bear a considerable burden of responsibilities, which threaten their health. Considering the high prevalence of low back pain and prevalent use of acupuncture in the treatment of this condition, we aimed to examine the prevalence of musculoskeletal diseases in middle-aged women.

Materials and Methods: In this cross-sectional study, 1000 women, aged 45-59 years, referring to healthcare centers of Mashhad, were examined and screened by physicians via history taking and physical examinations regarding the history and current status of osteoporosis, osteoarthritis, low back pain and other musculoskeletal disorders.

Results: The overall incidence of musculoskeletal disorders was 27.2%. The prevalence was 13.5% in rural women and 27% in women residing in urban regions. In both urban and rural populations, arthritis was the

most common disorder with an incidence of 32.5%. The prevalence rates of osteoporosis and low back pain were 28% and 23%, respectively.

Conclusion: Considering the high prevalence of arthritis and back pain in women, especially in urban populations, adopting complementary medicine can reduce pain and disabilities. It is recommended that an educational package about complementary medicine treatments be applied in training sessions for middle-aged women at healthcare centers.

Keywords: Complementary medicine, Middle-aged, Musculoskeletal diseases, Women

HN10101

Effect of Mummy on pain and wound healing of midian sternotomy in patients undergoing off-pump coronary artery bypass grafting surgery

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Median sternotomy is the most common procedure in child and adult cardiac surgery so, 75000 sternotomy is operating in America. Despite that patients receive antibiotic prophylaxis, sternal wound infections are the most serious and most important complications of open-heart surgery. 1% to 2% of patients who undergo sternotomy are suffering from this condition. Other surgical complications

of open-heart surgery can be named sternal dehiscence and mediastinitis can increase risk of morbidity and mortality. Sternal dehiscence usually occurred in patients with osteoporosis, age >75 or morbid obesity and with renal failure, chronic obstructive pulmonary disease, diabetes mellitus and sternal wound infection. Healing of sternum is a complex process so the process of bone fracture healing and the chemical factors that involve are not fully known. Consequently, finding methods to reduce the effects of open-heart surgery is necessary.

Traditional medicine with a long history can provide effective treatment of various diseases. Considering the properties of traditional medicine such as low adverse effects, public confidence and availability, World Health Organization has suggested the use of medicinal plants. Medical plants play an important role in folk medicine so today's use of herbal medicine increase substantially. Mummy, Mumnaye or Shilajit is a blackish brown exudate found in cracks and fractures of mountains. This herbomineral drug is resulting from oxidizing oil and traditionally has been used in treatment of various diseases.

Many studies have indicated diverse therapeutic effects of Mummy. stimulates the immune system, antioxidant and anti-inflammatory activities also improve symptoms of stomach disorders, inflammation of joints, nervous and cardiovascular issues, and strains of muscles and tendons and urinary tract infections are the part of the benefits of this herbal drug. But what is important in the study is its role of Mummy in wound healing and improvement of bone fracture in open-heart surgery. In traditional medicine, Mummy utilize in reduction of pain and improve of bone fracture so today's research confirm positive effects of Mummy in clinical trial and in-vivo system. Also studies showed no side effect or complication of Mummy and as a result use of Mummy is safe. Mummy not only reduce time of healing but also decrease risk of infection in medial sternotomy.

Finally, it seems Mummy as a herbal medicine can decrease complication of sternotomy due to improve of wound healing, reduce pain and duration of bone fracture healing and decrease of risk of infection although further clinical trial studies are necessary.