

Background and Objective: Bisphenol-A (BPA) is a chemical substance with increasing exposure to it and applies toxic effects on the liver. Resveratrol (RES) is a medicinal plant that functions as protective properties. This study was designed to evaluate the protective effects of resveratrol on the liver after BSA administration in adult male rats. **Material method:** Thirteen Sprague dawley male rats were divided into 5 groups, one group as control and others daily receiving, BPA (50 mg/kg/d), RES (100 mg/kg/d), and BPA plus RES and olive oil by oral gavages, respectively. After 8 weeks, the liver was removed and prepared for stereological study.

Results: The total volume and number of hepatocytes, absolute nucleus and cytoplasm volume were respectively decreased by 18%, 41%, 32% and 37% in the BPA group in comparison to the control animals ($P < 0.05$). Also, the sinusoidal space was increased by 17%, 42%, 31% and 30% in the BP group compared to the control, RES+BP, RES and oil groups. RES-treatment due to increase by 11%, 13% and 21% in total volume, absolute nucleus and cytoplasm volume compare to BPA group ($P < 0.05$). Histopathological studies showed that the vacuolization of hepatocytes and irregularities in the liver structure and sinusoidal dilatation in BPA treated rats.

Conclusion: This study demonstrated that BPA causes hepatotoxicity and resveratrol as an antioxidant substance can protect the toxicity effect of bisphenol-A in adult male rats.

Key word: Bisphenol-A, Resveratrol, Hepatotoxicity, Liver, Stereology

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Clinical trials for controlling cancer complications based on principles of Persian medicine

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Background and Objective: Cancer rates are increasing worldwide, and the number of cancer patients is expected to rise to 21 million by 2030. Studies have shown that cancer patients are increasingly inclined to use complementary and traditional medicine. Persian medicine (PM) as a holistic medical school which has several-thousand-year old history, is based on the theory of four humors comprising phlegm, blood, yellow bile, and black bile. The aim of this study was to investigate clinical trials conducted based on principles of Persian medicine for controlling cancer complications.

Materials and Methods: In this review study, the keywords "cancer", "cancer complication", "traditional medicine" and "Persian medicine" were searched in the Iranian Registration Center of Clinical Trials (IRCT). Also, current investigations on related subjects were considered through a search of the Pub Med and Google Scholar until the end of 2018.

Results: Most clinical trials were conducted to evaluate the effects of psycho-educational interventions, aromatherapy, Iranian herbal medicine, massage, reflexology, and acupuncture on cancer complications. Most of the cancers which were evaluated were breast, prostate, and gastrointestinal cancers, especially colorectal cancer. Most of the complications that were assessments include nausea and vomiting, anxiety, depression, sleep disorders, fatigue, hot flashes, pain and neuropathy.

Conclusion: The clinical trials which conducted based on principles of Persian medicine indicate that traditional interventions might have beneficial effects on improving cancer complications, but the evidences we found were few. Further large and randomized controlled studies are necessary to confirm the benefits of PM on cancer complications.

Key words: Persian medicine, clinical trial, Iranian, traditional

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The effects of different doses of *Nepeta menthoides* in mice reserpine-induced depression

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Background: *Nepeta Menthoides* is an Iranian native plant with anti-depressant and sedative properties. This study was designed to search the effects of *Nepeta menthoides* aqueous extract pretreatment on reserpine induced depression

Material and Methods: 64 male mice were randomly divided into 8 groups of 8 mice. Control normal saline (10 ml/kg), fluoxetine (20 mg/kg), imipramine (10 mg/kg), Reserpine (10 mg/kg normal saline), and treatment groups received different doses of the extracts (50, 100, 200, 400 mg/kg) for 7 days. In the 8th day all of the groups except control normal saline received reserpine (4 mg/kg) and were tested 24 hours later. Tests included forced swimming (FST), tail suspension (TST) and open field test (OFT).

Results: reserpine enhanced immobility time (64.37 ± 5.93) in compared to normal saline (38.25 ± 2.59) while *Nepeta* pretreatment were declined immobility time in a dose dependent manner [25.75 ± 5.90 (100 mg/kg) and 23.5 ± 7.43 (200 mg/kg)]. Also, *Nepeta* reduced immobility time dose dependently in tail suspension test $p < 0.01$. Open field test showed that none of agents did not influence total motility.

Conclusion: Pretreatment with *Nepeta menthoides* could prevent of depression like behavior induced by reserpine better than fluoxetine and imipramine.

Keywords: *Nepeta menthoides*, Depression, Reserpine, Forced swimming, Tail suspension

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Effect of nettle (*Urtica Dioica*) on quality of sleep in hemodialysis patients: A randomized clinical trial

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Background: Sleep disorders are the common complication of end-stage renal failure. This study aimed to examine the effect of nettle (*Urtica Dioica*) on sleep quality in hemodialysis patients.

Materials and methods: This randomized clinical trial was conducted on 90 hemodialysis patients who were selected using the convenient sampling method and then randomly assigned into experimental and control groups. The experimental group received 400-mg nettle tablets three times a day for three consecutive months. The control group did not receive any intervention from the research team. The socio-demographic/ clinical characteristics were collected using a pre-structured questionnaire. Sleep quality was measured with the Pittsburgh Sleep Quality Index before intervention and after the first, second and third month of intervention.

Results: No statistically significant difference was found between the two groups for sleep quality before and after intervention ($p = 0.09$). The effect of nettle on sleep quality was not significantly different at the end of the first ($p = 0.14$), second ($p = 0.34$) and third ($p = 0.97$) month.

Conclusion: Our study showed that nettle did not significantly increase sleep quality in hemodialysis patients. Despite the use of hypnotics, sleep quality is commonly decreased in hemodialysis patients. However, nettle along with hypnotics helped maintain the stability of sleep quality in the present study. Nettle tablets in the hemodialysis patients decreased sleep latency and increased sleep duration.

Key words: Nettle, sleep quality, hemodialysis patients, clinical trial

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Pancreatic lipase inhibitory activity of Burdock (*Arctium lappa* L.) extract

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