1st International Congress of Veterinary Pharmacology & Pharmaceutical Sciences (1st ICVPS)
October 4 - 5, 2008 Tehran - Iran

Study on the effect of *Zataria multiflora* essential oil & BHT in rat: Histopathological findings

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Zataria multiflora is an endemic plant in Iran which has been used traditionally in food , especially in yoghurt as a flavouring agent , stimulant , condiment , carminative and for treatment of pre-mature labor pains and rupture. The extracts of aerial parts of *Z.multiflora* showed anti-inflammatory effects against acute and chronic inflammations in mice and rats .In the present study the hepathotoxicity was assassed in terms changes in histological damage and serum enzymes(SGOT , SGPT , ALP) . In this study 25 male rats were divided into 5 equal groups randomly .Groups 1, 2 and 3 received *Z.multiflora* essential oil in different doses of 100, 200 and 300 µl / kg by gavage method respectively. Positive and negative control recieved BHT (15 mg /kg) and normal saline. After 14 days all rats were killed and their livers and kidneys removed , fixed and prepared for histopathological evaluation. The result on this study showed that no sign of evidence of characteristic hepatotoxicity and nephrotoxicity was found in rat treated with different doses of *Z. multiflora* in this experiment . No significant changes was observed in relative weight of liver and kidney and serum enzymes in test group. In group BHT , mild billary hyperplasia and glomerular atrophy was seen. In conclusion , *Z.multiflora* has not poisonus effects on liver and kidney and can be use as antioxidant instead of BHT.

Keywords: Histopathological finding , *Zataria multiflora* ,Liver , Kidney

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Effects of methadone on the liver and kidney of the newborn mice

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Methadone is primarily µ agonist with pharmacological properties qualitatively similar to those of morphine , and as a maintenance treatment for narcotic abuse. We studied the effects of intrauterine hepatotoxicity and nephrotoxicity by methadone on the postnatal developing and adult stages of mice. We used offspring delivered from dams that had been given 3 ,6 and 9 mg/ kg / day methadone in days of 8th to 20 th gestational. Histopathological examination of the liver and kidney offspring on postnatal days 2 (p2) , p7 , p 14 and p21 revealed that there were not any important injuries in this tissues ,but cause of preportal reactive lymphocitic. Thus, chronic intrauterine exposure to low – dose methadone haven't impaired liver and kidney functions.

Keywords: intrauterine , kidney , liver ,maintenance , methadone , mice