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Comparative pathological study of *Matricaria chamomilla* and Methadone effects on liver of morphine dependent rats

Khabbaz M, Shirazi Sh, Rostami Azmand MR, Movaffagi SM, Azimi F, Shabestari SA

Faculty of Veterinary Medicine, Azad University, Tabriz, Iran (mehdi_khabbaz82@yahoo.com)

Addiction to opiates such as morphine is one of the major world health problems. Some reports show that *Matricaria chamomilla* extract contains flavonoids, which exert Benzodiazepine-like activity and inhibited the expression of abstinence syndrome in morphine-dependent animals. **Objective:** To determined and comparison the effect of *Matricaria chamomilla* extract injection on morphine withdrawal syndrome signs (MWS) in rats and pathological study of Mc and Methadone on liver of Morphine dependent Rats. **Materials and Methods:** 32 male rats (200-300gr) (n=8) were tested in 4 groups: saline group which was received only saline, Morphine group which was received only Morphine (10mg/kg) for 10 days, Mc group were received Mc extract (20mg/kg I.P) 30 min before Morphine administration and Methadone group. In the end of training day all groups received naloxane (5mg/kg I.P) 3hours after last injection of morphine and then the frequencies of withdrawal behavior were assessed for 30min with use of Open field test and liver pathological condition has been studied. **Results:** Our results show that I.P administration of MC extract dose dependently attenuates most of morphine withdrawal syndrome and no finding any liver lesion in Mc group, but Methadone has many serious pathological effects on liver, some of them potentially fatal. **Conclusion:** These result suggested that injection of MC extract in to the I.P is helpful for morphine withdrawal syndrome treatment and is safer than Methadone therapy.

Keywords: *Matricaria chamomilla* , Methadone, morphine dependent rats

Histopathologic study on the effects of methionine in reduction of hepatotoxicity and gastritis due to co-administration of gentamicin and indomethacin in rats

Mozhdeganloo Z, Mohammadipoor A, Farkhondeh T, Derkhshanfar A

Faculty of Veterinary Medicine, Shahid Bahonar University, Kerman, Iran (z_mozhdeganloo@yahoo.com)

Gentamicin is a wide spectrum aminoglycoside used against gram negative bacterial infections, therapeutic does of this drug resulted in nephrotoxicity and hepatotoxicity. Indomethacin is one of the NSAIDs with side effects on stomach, liver and Kidney. Co-administration of indomethacin and gentamicin may resulted in exaggeration of their side effects .In this research, 42 male Sprague dawley rats were divided randomly into 6 equal groups. In the period of 14 days group 1-6 received normal saline (I.P), gentamicin (I.M), indomethaci (I.M), gentamicin (I.M) plus indomethacin (I.M), L-methionine (I.P), and gentamicin (I.M) plus indomethacin (I.M) and L-methionine(I.P) respectively once a day. In day 15, rats were euthanized and histopathologic slides of the liver and stomach were prepared. Histopathologic examination revealed and edema in tunica mucosa and submucosa of stomach in group 3 and 4, and mild hemorrhage in tunica mucosa of stomach of group 3 .In group 2 and 4 capillarization , deformed hepatocytes , apoptosis and mononuclear cell infiltration in portal area were seen in liver . Fibrosis of portal area was obvious in group 4. For the first time the results of the peresent study showed that methionine can prevent form side effects of Co-administration of indomethacin and gentamicin in liver and stomach.

Keywords: histopathologic, methionin, hepatotoxicity,gastritis, gentamicin, indomethacin, reduction