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Background and Aim: Ferula szowitsiana is an Iranian native plant that its anti-nociceptive and anti-inflammatory effects were shown in our previous study. In this study we examined the plant extract interaction with opioidergic system by using naloxone as an opioid receptor antagonist.

Methods: Aerial part hydro-alcoholic extract of Ferula szowitsiana were prepared. Saline, ethanol and tween 80 (8:1:1 respectively) were used as drug vehicle. In our pervious study the intraperitoneal (i.p.) dose of 400 mg/kg was effective dose among the doses of 50,100,200 and 400 mg/kg of plant extract. To investigate the extract mechanism of action, the i.p. dose of 400 mg/kg is chosen. Rats (200-250 g) were categorized in 5 groups: control, i.p vehicle, naloxone (2mg/kg, i.p.), i.p. extract and i.p (naloxone + extract). Groups were tested by formalin test for chemical pain and plethysmometeric paw edema volume assessment for inflammation evaluations.

Results: Data showed that analgesic effects of Ferula szowitsiana reversed by naloxone (at least $P<0.01$). Despite of extract + naloxone anti-inflammatory effect ($P<0.05$), naloxone significantly reduced the anti-inflammatory effect of extract ($P<0.01$).

Conclusion: It seems that hydro-alcoholic extract of Ferula szowitsiana affects opioid receptor and it may leads to release endogenous opioids, so it was able to reduce the intensity of chemical pain and inflammatory paw edema. Because the extract anti-inflammatory effect was not completly inhibited by naloxone, it may suggest that another systems is contributed in this effect, but more research is needed.

Keywords: Ferula szowitsiana, Naloxone, Pain, Rat

Count: 86

AbstractID: 79

Effects of Ferula szowitziana extract on thermal pain in rat

Presentation Type: Poster

Oral & Poster Presantation
First International Congress of Pain (TUMS) &
12th Scientific Congress of Iranian Pain Society (IASP Chapter)
13-15 May, 2015 / Tehran

Subject: Pharmacological Treatment-

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Background and Aim: Ferula szowitziana in traditional medicine mentioned as analgesic. Due to its terpenes its anti-nociceptive effect is expected. In this study, its effect on thermal pain sensation in Tail-Flick test was investigated.

Methods: Hydro-alcoholic extract of areal part of Ferula szowitziana was prepared. The extract solved in saline, ethanol and tween 80 (8:1:1 respectively). Male Wistar rats (200-250g) were placed in five groups including control, i.p. injection of solvent, i.t. injection of solvent, extract in four doses groups of (50, 100, 200 and 400 mg/kg, i.p.) and i.t. administration of extract equivalent to i.p. effective dose of 400 mg/kg. Tail-Flick test is used for thermal pain assessment.

Results: I.p. administration of Ferula szowitsiana extract caused hyperalgesia in tail-flick test in a dose dependent manner as hyperalgesia was significant for the i.p. doses of 200 and 400 mg/kg ($P< 0.01$). Hyperalgesia was not observed in i.t. administration of extract.

Conclusion: It seems that hydro-alcoholic extract of Ferula szowitsiana may be affects TRPV1 receptors and sensitizes them, so it produced a reduction in thermal pain threshold.

Keywords: Ferula szowitziana, TRPV1 Receptors, Tail-Flick, Wistar rat

Count: 87

AbstractID: 80

Comparing Transcervical Intrauterine Lidocaine Instillation With Rectal Diclofenac For Pain relief During Outpatient Hysteroscopy: A Randomized Controlled Trial

Presentation Type: Poster