

عنوان مقاله:

Effect of ethanolic extract of Safflower on naloxone-induced morphine withdrawal signs in mice

محل انتشار:

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خلاصه مقاله:

Background and aims: Safflower (*Carthamus tinctorius* L.) from Asteraceae family has different biological activities including analgesic, antidepressant, anti-inflammatory, antispasmodic and neuroprotective effects. This study designed to evaluate its effect on naloxone-induced morphine withdrawal signs. Methods: In this experimental study, male NMRI mice (۲۵-۳۰ g) were randomly divided into ۵ groups of ۸: control groups received morphine and normal saline (۱۰ml/kg) and other groups received fluoxetine (۲۰mg/kg) and different doses of ethanolic extract of Safflower (۱۰۰, ۲۰۰ and ۴۰۰mg/kg). Morphine dependency was induced by intraperitoneal (i.p.) injection of increasing doses (۵۰-۷۵ mg/kg) of morphine. Withdrawal signs were elicited by naloxone (۵mg/kg, i.p.) and number of jumpings and also presence of climbing, writing, wet dog shakes, teeth chattering, diarrhea, grooming and rearing during a ۳۰ min period. Results: The ethanolic extract at all doses (۱۰۰, ۲۰۰ and ۴۰۰ mg/kg, i.p., $p < 0.001$) and fluoxetine (۲۰mg/kg, i.p., $p < 0.01$) significantly inhibited the number of jumps. Additionally, all doses of extract reduced the grooming and writing ($p < 0.05$). Only ۲۰۰ and ۴۰۰ mg/kg of extract reduced the other checked signs including climbing, rearing and teeth chattering. All doses of extract couldn't reduce wet dog shake and diarrhea significantly ($p > 0.05$). Fluoxetine significantly inhibited the other signs except wet dog shakes and diarrhea. Conclusion: These findings indicated that Safflower extract has therapeutic potential in management of opiate withdrawal signs and this is comparable to the effect of fluoxetine. However, further studies need for clarify their exact mechanism of action.

کلمات کلیدی:

Safflower, Morphine, dependence, withdrawal signs, naloxone

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