

## **Evaluation the Effect of chronic administration of pregabalin on morphine withdrawal syndrome in rats**

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Affecting excitatory neurotransmitters such as glutamate, Substance P etc. is one of the important analgesic mechanisms of morphine. In case of continuous morphine consumption, after a while, the neurotransmitters increase and dependence occurs. Pregabalin is th subject of this study, which exerts its stimulatory effect on this phenomenon possibly by reducing the levels of neurotransmitters. Objective: To evaluate the effect of chronic administration of pregabalin on morphine withdrawal symptoms in rats. Methods: The experimenting were performed on male Wistar rats, (275-225 g). To create a dependency model, a 9-day injection of morphine on increasing doses (5, 10, 10, 15, 15, 20, 20, 25, 25 mg/kg sc. respectively), twice daily, was used. On day 9, an hour after morning dose of morphine, naloxone was administered to mice with 4mg / kg dose (ip.), and withdrawal symptoms such as jumping, wet dog-like movements etc. was recorded for 45 minutes. In groups treated with pregabalin, the drug (pregabalin) dissolved in the carrier in 10, 20 and 40 mg / kg, ip. doses and was administered a half hours after the injection of morphine . Results: Chronic treatment with pregabalin not only reduced withdrawal symptoms individually and dose-dependently, but also could significantly reduce the total symptoms of the withdrawal syndrome. Conclusion: chronic injection of pregabalin, is capable of reducing most of the symptoms of morphine withdrawal syndrome.

**Key words:** pregabalin, withdrawal syndrome, morphine.