

عنوان مقاله:

The Effect of Reversible Locus Coeruleus (LC) on I.V Self-Administration of Morphine and Morphine Withdrawal Syndrome(MWS) Signs in Rats

محل انتشار:

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نویسندگان:

محمد حسین اسماعیلی

مهین گنج خانی

علی اوسط ملتی

شهرام رستاک

خلاصه مقاله:

Background and Objective: Locus coeruleus (LC) has been hypothesized to play an important role in a variety of behaviors and opiate withdrawal. This study was designed to determine the effects of reversible inactivation of LC on self-administration of morphine and morphine- withdrawal syndrome signs (MWS). Materials and Methods: ۲۴ male rats (۲۵۰-۳۰۰gr) were surgically implanted bilaterally with cannula in LC then implanted with catheters in the right jugular vein. The rats were tested in ۲ groups: Control(saline) and morphine. Morphine group was divided into ۳ subgroups: control, sham-operated and LC-inactivated group where they received ۱μL ۲% Lidocaine ۵ minutes prior to testing. Animals were allowed to self-administer morphine (۱mg/infusion) during ۱۰ consecutive days for ۲ hours. The number of lever pressing was recorded. At the end of the training day all groups received naloxone (۲mg/kg I.P) and MWS were studied for ۳۰ minutes. Results: LC inactivation prevents the development of tolerance and dependence on morphine and greatly attenuates morphine-withdrawal syndrome. Conclusion: LC inactivation not only attenuates .morphine withdrawal syndrome but also prevents morphine tolerance and dependence in rats

کلمات کلیدی:

Morphine-withdrawal syndrome, Locus coeruleus, Self-administration, Rat

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