

عنوان مقاله:

Role of Opioid System in Empathy-like Behaviours in Rats

محل انتشار:

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نویسندگان:

Masoud Nazeri - Department of Neuroscience and Basic Sciences, School of Medicine, AJA University of Medical Sciences, Tehran, Iran

Akram Nezhadi - Department of Neuroscience and Basic Sciences, School of Medicine, AJA University of Medical Sciences, Tehran, Iran

Mohammad Shabani - Department of Neuroscience AND Neuroscience Research Center, Neuropharmacology Institute, Kerman University of Medical Sciences, Kerman, Iran

خلاصه مقاله:

Background: Empathy is defined as the ability to simulate the mental states of others. Recent studies have demonstrated empathy-like behaviors in other animals including rats and mice. The objective of the current study was to evaluate the effect of acute administration of morphine and naloxone on cognition and nociception changes following observing conspecifics undergoing nociceptive stimulus. Methods: Adult male Wistar rats were used (n = 8 for each group). One cage mate received formalin injection into the hind paw five times within a nine-day period and the other cage mate observed the pain while being pretreated with saline, morphine, or naloxone [10 mg/kg, intraperitoneal (i.p.)]. Pain behaviors, anxiety-like behaviour, locomotion, balance and muscle strength were evaluated in the observer animals. Findings: Observing a cage mate in pain increased anxiety-like behavior and reduced thermal pain threshold in the observer animals. Administration of morphine reversed these effects and naloxone did not affect the responses. Conclusion: Results of the current study reveal an important role for opioid receptors (ORs) in empathy for pain, so that activation of this system dampens the empathy-like responses

کلمات کلیدی:

Morphine, Empathy, Rats, Anxiety

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