

عنوان مقاله:

Antinociceptive effects of maprotiline in a rat model of peripheral neuropathic pain : possible involvement of opioid system

محل انتشار:

مجله علوم پایه پزشکی ایران، دوره 18، شماره 8 (سال: 1394)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Hamid Reza Banafshe - Physiology Research Center, Kashan University of Medical Sciences, Kashan, Iran

Valiollah Hajhashemi - Department of Pharmacology and Toxicology and Isfahan Pharmaceutical Research Center, School of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran

Mohsen Minaian - Department of Pharmacology and Toxicology and Isfahan Pharmaceutical Research Center, School of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran

Azam Mesdaghinia - Physiology Research Center, Kashan University of Medical Sciences, Kashan, Iran

Alireza Abed - Department of Pharmacology, School of Medicine, Kashan University of Medical Sciences, Kashan, Iran

خلاصه مقاله:

Objective(s) : Neuropathic pain remains a clinical problem and is poorly relieved by conventional analgesics. This study was designed to determine whether maprotiline administration was effective in alleviating symptoms of neuropathic pain and whether the antinociceptive effect of maprotiline mediated through the opioid system. Materials and Methods : Neuropathic pain was induced by chronic constriction injury (CCI) of the sciatic nerve in rats, which resulted in thermal hyperalgesia, and mechanical and cold allodynia. Maprotiline (۱۰, ۲۰ and ۴۰ mg/kg, IP) was administered on the ۷th and ۱۴th days after surgery. To study the role of the opioid system in the antinociceptive effects of maprotiline, maprotiline (۲۰ mg/kg, IP) was administered in combination with naloxone (۱ mg/kg, SC) on the ۷th post-surgery day. Behavioral tests were done at ۴۵ min after drug injections on the ۷th and ۱۴th days after surgery. Results : Systemic administration of maprotiline blocked heat hyperalgesia, cold allodynia and reduced mechanical allodynia. Also antihyperalgesic effect of maprotiline was reversed by pretreatment with naloxone. Conclusion : Our results suggest that maprotiline can be considered a potential therapeutic for the treatment of neuropathic pain, and the opioid system may be involved in the antihyperalgesic effects of maprotiline.

کلمات کلیدی:

Maprotiline, Naloxone, Neuropathic pain, Opioids, Rat

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1938958>

