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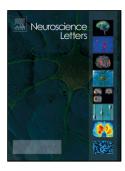
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The blockade of GABAA receptors attenuates the inhibitory effect of orexin type 1

receptors antagonist on morphine withdrawal syndrome in rats

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Highlights:

• OX1Rs are involved in morphine withdrawal syndrome in LC nucleus.

• Intra-LC microinjection of SB-334867 attenuated morphine withdrawal signs.

• Bicuculline abolished the effect of SB-334867 on morphine withdrawal signs.

Abstract

The aim of present study was to investigate the involvement of orexin-A neuropeptide in

naloxone-induced morphine withdrawal syndrome via modulating neurons bearing GABAA

receptors. The locus coeruleus (LC) is a sensitive site for expression of the somatic aspects of

morphine withdrawal. Intra-LC microinjection of GABAA receptor agonist attenuates

morphine withdrawal signs in rats. Here we studied the influence of LC orexin type 1

receptors blockade by SB-334867 in presence of bicuculline, a GABAA receptor antagonist,

on naloxone-induced morphine withdrawal syndrome.

Adult male Wistar rats, weighing 250-300 g, were rendered dependent on morphine by

subcutaneous (s.c.) injection of increasing morphine doses (6, 16, 26, 36, 46, 56 and 66

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