

# The Antinociceptive Effect of A Novel Long-acting Nalubphine Preparation

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摘要

## Abstract

**Background.** A long-acting analgesic may be particularly desirable in patients suffering from long-lasting pain. The aim of the study was to evaluate the antinociceptive effect of a novel nalubphine preparation and to determine its duration of action.

**Methods.** The antinociceptive effects of i.m. nalubphine HCl in saline and nalubphine base in sesame oil were evaluated in rats. The in vitro drug-releasing profiles of nalubphine HCl and base in different preparations were also evaluated.

**Results.** We found that i.m. nalubphine HCl 25, 50 and 100  $\mu\text{mol kg}^{-1}$  produced dose-related antinociceptive effects with a duration of action of 1.5, 2 and 3 h, respectively. I.M. nalubphine base 100, 200 and 400  $\mu\text{mol kg}^{-1}$  also produced dose-related antinociceptive effects but with longer durations of action: 27, 49 and 55 h, respectively. In vitro studies demonstrated that nalubphine base in sesame oil had the slowest drug-releasing profile of the different preparations.

**Conclusions.** I.M. injection of an oil formulation of nalubphine base produced a long-lasting antinociceptive effect.

**Keywords:** Keywords: analgesics opioid, nalubphine; nerve, long-acting antinociception