

Abstract

The present experiments were initiated to study the effects of morphine, nefopam and paracetamol in the naked mole-rat, a hairless rodent that lives in subterranean colonies of up to 300, following the inability to demonstrate morphine analgesia in the hot-plate test in the rodent. The formalin test was used. Injection of 20 microliters 10% formalin produced two periods of high licking and pain behaviour, the early (0-5 min) and the late phase (15-60 min). Morphine (10 or 20 mg/kg), nefopam (10 or 20 mg/kg) and paracetamol (200 mg/kg) significantly inhibited the two phases. Paracetamol (400 mg/kg) produced significant analgesia only during the late phase. It is concluded that, unlike in the hot-plate test, it is possible to demonstrate the analgesic effects of morphine in the naked mole-rat, in the formalin test.