



The inflammatory effect of opioid sedative drugs on rat uterus

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Abstract

Background & objectives: Morphine is a wide range use/ abuse opioid sedative. Naloxone is known for diagnosing and curing poisoning with narcotic or coma. This research surveys on effect of naloxone/ morphine on uterus of rat treated by nitric oxide (NO) producer repeatedly.

Material & Methods: Thirty six female Wistar rats weighing 200-250 g were used as the subjects. They were housed under 21 ± 3 °C with 12 h light as virgin. The animals were divided into 2 groups and each of them was subdivided into 4 groups. A group of rats were intra-peritoneally (i.p.) injected the precursor of NO, L-arginine (50 mg/kg, once a day), throughout 9 days. Other group similarly treated by this agent 30 min after receiving of naloxone (0.4 mg/kg, i.p.). Another group solely received naloxone (0.4 mg/kg, i.p., throughout the experiments). Three more groups passed similarly the procedure but in the priority (10 min) presence of morphine (5 mg/kg, i.p.). One more group solely received morphine (5 mg/kg, i.p., throughout the experiments). The control saline groups (8 rats) only received saline (1 ml/kg, i.p.). The animals' uteri were isolated after completion of the treatments.

Results: All uteri samples obtained from L-arginine treated rats that priority received single naloxone or morphine-naloxone significantly showed increased diameter compared to those that received saline or solely L-arginine.

Discussion & Conclusion: Based on these data the sedative drugs have inflammatory effects on rats' uteri. This finding likely proposes the NO as a modulator of uterus inflammatory signs.

Key words: Sedative drug, L-Arginine, Uterus, Inflammation