

عنوان مقاله:

Acute and chronic effects of morphine on cardiovascular system and the baroreflexes sensitivity during severe increase in blood pressure in rats

محل انتشار:

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خلاصه مقاله:

BACKGROUND: This study aimed to determine the role and effects of baroreflexes during acute increase in blood pressure (BP) after severe and long-term infusion of morphine. **METHODS:** This experimental study was conducted on male desert rats. They were assigned into 4 groups and the rats of the case group received morphine in the short and long term periods, whereas the control rats received normal saline for the same duration. Then, the rats were anesthetized, and their femoral artery and vein were cannulated for the injection of phenylephrine and naloxone, respectively. The injection of phenylephrine was performed by the device after a period of recording BP, mean arterial pressure (MAP), heart rate (HR) and baroreflex sensitivity (BRS) in order to induce acute hypertension before and after injecting naloxone. The Student t-test and analysis of variance (ANOVA) were used for statistical analysis. **RESULTS:** The obtained results suggested that acute and chronic injections of morphine may cause significant reduction in systolic and diastolic arterial BP as well as the mean arterial pressure; moreover, it significantly increased the sensitivity of baroreflexes. Furthermore, the increased baroreflex sensitivity was observed after acute injection of morphine, whereas chronic morphine injection caused reduction in baroreflex sensitivity. **CONCLUSION:** It seems that the details of the opiates' effects on the body including cardiovascular system depend on the type of opioids and consequently, on the type of stimulated receptor. **Keywords:** Morphine; Baroreflex Sensitivity; Blood Pressure

کلمات کلیدی:

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