



The role of morphine in polycystic ovary syndrome

Maryam Darban Fooladi¹, Manizheh Karami^{1,2}

1-Department of Biology, Faculty of Basic Sciences, Shahed University, Tehran, Iran

2-Neurophysiology Research Center, Shahed University, Tehran, Iran

Introduction: The effect of opioids on reproductive system is generally considered. In this study the effect of opioid analgesic Morphine by the studies of ovarian tissue is examined.

Methods: Twenty-four 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 3 groups receive Morphine and the control group. First group was injected by Morphine (1 mg/kg i.p), another group receive Morphine (5 mg/kg i.p) and third group was treated Morphine (10 mg/kg i.p). control group was solely injected saline. After period of injection, all animals passed surgery and prepared for tissue section. They were fixed in 10% Formalin and were stained with Hematoxylin and Eosin method. Length of ovaries was measured.

Results: All samples of rat's ovary that were received Morphine observed significantly differences in ovaries biometry and increase follicular cysts, compared with those were treated by saline. the effective Dose was 5 mg/kg.

Conclusion: Opioid activity appears to be altered in women with PCOS, both centrally and peripherally. the interaction of these systems are complex. The complex interactions between the opioid system, glucose regulation, carbohydrate metabolism, and the hypothalamic-pituitary-ovary axis (gonadotropin system) may help in explaining some of the metabolic and reproductive disturbances seen in PCOS. So clinically, the linkages between opioid system have role in the management of PCOS-related infertility.

Keywords: Opioid; Morphine; Ovary; PCOS

۱۸/۱۱/۹۴