

## عنوان مقاله:

Protective Effect of Baclofen against Oxidative Stress in Dorsal Hippocampus of Rats with Morphine-Induced Ovarian Polycystic

## محل انتشار:

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## خلاصه مقاله:

**Background and Objectives:** Studies have shown that polycystic ovary (PCO) may be induced by morphine and CA1 may be damaged by PCO-related oxidative stress but can be protected by a potent GABAB receptor agonist. Therefore, this study aimed to investigate the protective effect of baclofen against oxidative stress in the dorsal hippocampus (DH) of morphine-treated rats with ovarian cysts. **Materials and Methods:** In total, 66 female Wistar rats were selected and randomly divided into control and experimental groups. The control group received saline (1 ml/kg, intraperitoneally [i.p.], once a day). Experimental groups were treated with morphine (5 mg/kg, i.p.), baclofen alone (10-30 mg/kg, i.p.), and baclofen (10, 20, 30 mg/kg, i.p.) before morphine (5 mg/kg, i.p.), once daily. One group received morphine (0.4 µg/rat) once in the ventromedial hypothalamus, and the last ovariectomized group was administered morphine (5 mg/kg, i.p.) after recovery. Then blood and hippocampus samples were prepared. Moreover, the levels of oxidative stress factors (GPX, MDA, SOD, and CAT), and the intensity of estrogen and glucocorticoid receptors in DH were evaluated. Ovaries and the uterus were also examined biometrically. **Results:** In the morphine-treated groups, regardless of the injection method, the development of follicles was rare, compared to the control group, instead, thick-walled follicular cysts were abundant. However, in the groups that received baclofen alone or baclofen together with morphine, the number of cysts decreased and the number of mature follicles increased significantly. Oxidative agents showed high levels in the DH of the morphine-treated group, which correlated with low estrogen receptors in DH. However, baclofen pretreatment improved these conditions. Besides, glucocorticoid receptors in DH did not show significant differences in different groups, and necrosis in the CA1 area was not observed either in the morphine-receiving group or in the other groups. The uterus did not show significant changes in any group. **Conclusion:** Prophylactic use of baclofen can protect against morphine side effects

## کلمات کلیدی:

Baclofen, Cyst, Dorsal hippocampus, Morphine, Ovary, Oxidative stress

لینک ثابت مقاله در پایگاه سیویلیکا:

