



## Study the effects of neonatal administration of tamoxifen on the structure of mammary gland in adult female mice

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**Objective or background:** Tamoxifen as a non-steroid anti-estrogenic compound is prescribed as co-treatment in breast and uterus cancers. Tamoxifen also competes with the physiological estrogen hormone; however, in some cases it can also activate genes. Depends on organ/tissue, this drug may agonizes or antagonizes the estrogen effect. The purpose of the present study was to investigate the effects of neonatal administration of tamoxifen on the histology of **mammary gland** in adult female mice.

**Materials& methods:** 10 neonate female mice were divided in to test and control groups (n=5). Control group received sesame oil and test group received tamoxifen (400µg/kg/day) during day1 to day 5 after birth, via subcutaneous injections. Then 2 months old mice at di-estrus stage of estrus cycle were perfused and their mammary glands sampled, processed for histological preparation, cut and stained (H&E) and examined microscopically.

**Results and conclusion:** In this study, we found decrease in body weight of animals which received tamoxifen ( $p \leq 0.001$ ) comparison with control group. In compare with control, the diameter and the number of milk ducts were reduced. In conclusion it seems that tamoxifen, as a selective estrogen receptor modulator may antagonize the estrogen effects in mammary gland. Further studies are essential to investigate other effects of tamoxifen in the female **Mammary gland**.

**Keywords:** Tamoxifen.Mammary gland. Estrogen.Mice