Title

~~Effecst~~Effects ~~Of~~ of different doses of tamoxifen on the sperm parameters and chromatin quality in mice: an experimental model

Running title: tamoxifen effect on sperm parameters and chromatin
Study type: The original article

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Abstract

Background: Tamoxifen (TX) is widely used for treatment of male factor and idiopathic infertility. It ~~is~~ has been shown that TX induces sperm production and so improves male fertility. Due to importance of sperm chromatin quality in all steps of reproduction, the aim of the present study was to investigate the effects of TX on sperm parameters and chromatin quality in mice.

Objective: This study evaluated the ~~effecst~~effects ~~Of~~ of different doses of tamoxifen on the sperm parameters and chromatin quality in mice~~-~~.

Materials & Methods: In this research, 24 male NMRI mice were divided into 3 groups including group A: control animal ~~received~~ receiving vehicle~~-~~; group B: ~~that~~ the group ~~received~~ receiving basal diet and TX 0.4 mg/kg/day; ~~TX~~ and group C: the group ~~received~~ receiving basal diet and TX 0.6 mg/kg/day ~~TX~~ for 35 days. ~~After that~~Thereafter, epididymal spermatozoa were analyzed for standard parameters and nuclear chromatin quality using Aniline Blue (AB) and

Toluidine Blue (TB) staining.

Results: The results ~~showed~~ indicated that although the TX did not affect the sperm count~~-~~, motility and viability parameters, ~~but it can increase~~ it could elevate the percentage of sperm cells with abnormal morphology and abnormal chromatin at both ~~doeses~~doses. In addition, in comparison with the control mice, ~~we had~~ a significant elevation was observed in spermatozoa with residual histones (assessed by AB staining) at high doses of TX.