



Effects of Cadmium on Female Fertility Parameters: An Experimental Study

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ABSTRACT The aim of the present study was to evaluate the effects of cadmium administration on female infertility parameters in mice. A total of 54 female mice were randomly allocated into three study and three control groups. Cadmium (200 ppm) was added into the water of study groups for 30, 60 and 90 days. The histopathological examination of vaginal smears of mice as well as evaluation of serum levels of estradiol, luteinizing hormone (LH), follicle stimulating hormone (FSH) and prolactin was performed. Administration of cadmium for 30 days caused minor histopathological alterations in the morphology of vaginal smears. 60-day and 90-day exposures of cadmium resulted in thinning of vaginal epithelium and increase in apoptotic cells. Prolonged exposure to cadmium was associated with significantly decreased serum levels of estradiol. However, levels of luteinizing hormone, follicle-stimulating hormone and prolactin did not differ between control and study groups. The results have shown that cadmium may contribute to unexplained female infertility.