

عنوان مقاله:

The protective role of vitamin E on the testicular tissue in rats exposed to sodium arsenite during the prenatal stage till sex maturity: A stereological analysis

محل انتشار:

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نویسندگان:

.Malek Soleimani Mehranjani - *Department of Biology, Faculty of Sciences, Arak University, Arak, Iran*

.Rezvan Taefi - *Department of Biology, Faculty of Sciences, Arak University, Arak, Iran*

خلاصه مقاله:

Background: Vitamin E is an effective antioxidant, protecting cells against oxidative stress. Objective: In this investigation the protective effect of vitamin E on the testis during development and spermatogenesis in rats exposed to sodium arsenite was evaluated. Materials and Methods: Pregnant Wistar rats were divided into 4 groups (n=8) control, sodium arsenite (8 mg/kg/day), sodium arsenite+vitamin E (100 mg/kg/day) and vitamin E. Treatment was carried out from day seven of pregnancy till 90 days. Finally the right testis was stereologically studied. The obtained data was analyzed using one way ANOVA and Tukey's test and the means difference was considered significant at $p < 0.05$. Results: The weight and volume of testis, volume of seminiferous tubules and its diameter, volume of interstitial tissue, height of germinal epithelium and the total number of types A and B spermatogonia, spermatocyte, spermatid and sertoli cells reduced significantly in sodium arsenite group compared to the control. Co-administration of vitamin E and sodium arsenite compensated the adverse effects of sodium arsenite on the above parameters. Conclusion: We concluded co-treatment of rats with sodium arsenite and vitamin E could prevent the adverse effects of sodium arsenite exposure on the testicular tissue during the prenatal stage till sex maturity

کلمات کلیدی:

Sodium arsenite, Vitamin E, Stereology, Testis, Rat

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