The long-term effect of Hinosan on Spermatogenesis on the Balb/C Mice

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Abstract

Background & Objective: Hinosan is an organophosphate that inhibit acetylcolinesterase activity, which could be resulted in damages of genital organs. This compound has been used extensively in the agriculture, for pest control. Therefore, in the present study we investigated the effect of Hinosan on spermatogenesis in mice.

Materials & Methods: For this experimental study, the male mice were divided into three groups. In the cases group, mice were injected with Hinosan consecutive doses (20mg/kg i.p, five consecutive days per week for one month), sham (normal saline) and control (no injection). Animals were scarified 7 days after the latest Hinosan injection. Therefore, the mice testis sections were prepared and morphologic aspects of testis and spermatogenesis processes were examined. Data were analyzed using of one-way ANOVA. Significance was set at $P<0.05$.

Results: The Hinosan showed a significant decrease in number of germ cells, spermatocyt, spermatids, Leydig cells, blood vessels and also diameter of seminiferous on testes of the mice decreased, compared with control groups ($P<0.05$).

Conclusion: This study demenstrated that Hinosan is effective on spermatogenesis and seminiferous tubule structure, also can decrease germinal cells.

Key Words: Organophosphorus, Hinosan, Testis reducetue, Leydig cells

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