

عنوان مقاله:

Busulfan induced azoospermia: Stereological evaluation of testes in rat

محل انتشار:

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خلاصه مقاله:

The aim of the present study was stereological evaluation of testes of azoospermic animal model using busulfan in rat. Three groups of male adult rats were used in this study. The first group was injected by single dose of busulfan (10 mg kg⁻¹) and their testes were removed on day 35 post injection. The second group received double doses of busulfan with 21 days interval and their testes were removed on day 35 after the second injection. The testes of the third group were removed without busulfan therapy. In 10 circular transverse sections of tubules stained with hematoxylin-eosin, stereological parameters were measured. The testes were rated for its spermatogenic potential on a modified spermatogenic scale of 0 to 6. Cellular (germinal epithelium) diameter and area of the seminiferous tubules, total diameter and cross sectional area of the tubules of the seminiferous tubules in rats that received double doses of busulfan were less than the rats in single dose of busulfan and control groups ($p < 0.05$). Spermatogenesis index of seminiferous tubules in rats receiving two doses of busulfan was less than the rats received one dose of busulfan ($p < 0.001$) and the index of both treatment groups were less than the control group ($p < 0.001$). In conclusion, two doses of busulfan injection with 21 days interval produced an appropriate experimental model of induced azoospermia with comparable stereological indices of seminiferous tubules in rat.

کلمات کلیدی:

Busulfan, infertility, Rat, Stereology, Testes

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