

Original Paper

Effect of *phoenix dactylifera spathe* on seminiferous tubules structure and spermatogenesis in rat

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Abstract

Background and Objective: The *spathe of phoenix dactylifera* contains protein, fatty, fiber, sugar, moisture, furfural, coumarin, organic compounds of camphor family, phytosterols, 1, 2-Di methoxil 1, 4-Di methyl benzene. This study was done to evaluate the effect of alcoholic extract of *phoenix dactylifera spathe* on seminiferous tubules and spermatogenesis in adult male rats.

Methods: In this experimental study, 50 adult male rats were randomly allocated into five groups including: control, sham and experimental groups 1, 2 and 3. Animals in control group did not receive any treatment. Animals in sham group were received 0.2 ml normal saline intraperitoneally. Animals in experimental group 1, 2 and 3 were received 0.05, 0.1 and 0.2 g/kg/bw of alcoholic extract of *phoenix dactylifera spathe* intraperitoneally, respectively. After 14 days of study, the testis was removed and the sections of tissue were prepared. Testosterone hormone measured by γ -counter method.

Results: Serum levels of testosterone and the spermatozoa count were significantly reduced in the experimental groups in compared to control and sham groups ($P < 0.05$). The count spermatogonia, primary spermatocyte, spermatid, sertoli and leydig cells and seminiferous tubules structures did not reduce in the experimental groups in compared to control and sham groups.

Conclusion: *Phoenix dactylifera Spathe* alcoholic extract at doses of minimum and medium in adult male rats reduces sera level of testosterone and spermatozoa number.

Keywords: *Spathe of Phoenix Dactylifera*, Testis, Seminiferous Tubule, Spermatozoa, Testosterone, Rat

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