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Induction of antifertility with lupeol acetate in male albino rats.

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Source

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Abstract

The present study was undertaken to evaluate the antifertility activity of the active principle, i.e. lupeol acetate, isolated from benzene extract of Alstonia scholaris in male albino rats. The treatment with lupeol acetate at the dose level of 10 mg/rat/day did not cause any significant change in the body weights, but significant reduction in the weight of reproductive organs, i.e. testes, epididymides, seminal vesicle and ventral prostate, was observed. Testicular sperm count, epididymal sperm count and motility were found significantly declined when compared with controls, which resulted in reduction of male fertility by 100%. Arrest of spermatogenesis was noted at various stages with production of primary spermatocytes (preleptotene and pachytene), secondary spermatocytes and step-19 spermatids were decreased by 52.36, 54.91, 55.67 and 69.65%, respectively. The seminiferous tubules appeared reduced in size by 24.62%. Cross-sectional surface area of Sertoli cells as well as their counts were found to be significantly depleted. Leydig cell nuclear area and number of mature Leydig cells were decreased by 27.65 and 35.47%. Biochemical parameters of tissues i.e. protein, sialic acid, glycogen and cholesterol content of testes and seminal vesicular fructose also showed significant reduction.

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