

The effect of hydroalcoholic leaf extract of *Salvia officinalis* on serum levels of FSH, LH, testosterone and testicular tissue in rats

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Background

Since there is relatively little information about the effects of hydroalcoholic extract of *Salvia officinalis* on the reproductive system of animals, this study was carried out to examine the effect of hydroalcoholic leaf extract of *Salvia officinalis* on serum levels of LH, FSH, testosterone and testicular tissue in male rats.

Methods

In this experimental study, 31 male Wistar rats were randomly allocated into five groups: the control, normal saline and *Salvia officinalis* extract (100, 150 and 200 mg/kg/body weight) receiving groups. Rats were intraperitoneally injected with *Salvia officinalis* extract once daily (at 10 am) for 30 days. Blood samples were collected using a cardiac puncture method and the hormone levels were measured using the radioimmunoassay. Moreover, testes were removed and after fixation, sections were cut and stained for histological studies.

Results

The results indicated that *Salvia officinalis* extract (150 and 200 mg/kg) increased the serum testosterone level ($P < 0.001$) and seminiferous tubule diameter and number of sperms in tubule tunnel ($P < 0.01$). Serum LH and FSH levels did not significantly change in the group receiving the extract compared with the control group.

Conclusion

The effective concentration of hydroalcoholic leaf extract of *Salvia officinalis* has excitatory effects on male reproductive system leading to increase in serum testosterone level and spermatogenesis.