

Original Paper

Effect of alcoholic extract of *Ginger* during fetal life and breastfeeding on serum level of testosterone, LH, FSH and spermatogenic cells line in male mature offspring rats

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Abstract

Background and Objective: *Ginger* as a medicinal herb is used as a food flavoring and therapy of many diseases including infertility and male sexual disabilities. This study was carried out to evaluate the effect of alcoholic extract of *Ginger* during fetal life and breastfeeding on serum level of testosterone, LH, FSH and spermatogenic cell lines in male mature offspring rats.

Methods: In this experimental study, 72 female adult mice were randomly allocated into the 9 groups, including: control group (no treatment), sham groups including neonatal and perinatal groups which were received normal saline (0.5 ml daily) and 6 interventional groups. Animals in interventional groups were received doses of 50, 100 and 200 mg/kg/bw of alcoholic extract of *Ginger*, during neonatal and perinatal period, orally. After puberty eight male rats from each group were sacrificed. Serum level of testosterone, LH, FSH were measured and then by isolating testes, the cell numbers of leydig, sertoli, spermatogonia, spermatocyte and spermatid were counted.

Results: The extract of *Ginger* dose-dependently significantly increased the level of testosterone ($P<0.05$) and the number of spermatogenic cells in compared to controls ($P<0.05$). The dosage of 100 and 200 mg/kg/bw of alcoholic extract of *Ginger* significantly reduced the FSH and LH in compared to controls ($P<0.05$)

Conclusion: The oral consumption of *Ginger* during pregnancy and lactation dose-dependently increase the level of testosterone and the number of spermatogenic cells.

Keywords: *Ginger*, Testosterone, Luteinizing Hormone, Follicle stimulating hormone, Spermatogenic cell line, Rat

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