

Antifertility Activity of Hydroalcoholic Extract of *Ocimum Basilicum* Linn. Leaves on Female Wistar Rats

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Objective To determine the effect of hydroalcoholic extract of *Ocimum basilicum* Linn. leaves on ovulation, implantation and maintenance of pregnancy in adult female cyclic Wistar rats.

Methods *Ocimum basilicum* leaves extract (364 mg/kg and 624 mg/kg) was screened for its antiovarulatory, antiimplantation and abortifacient activities. Vaginal smear of each rat was monitored daily during the 15-day treatment of the first experiment. Estimation of cholesterol in ovarian tissue and its histology was carried out to confirm its antiovarulatory activity. In the second and third experiments, animals received treatment from 1st to 7th and 8th to 16th day of pregnancy, respectively. The number of implantations and litter size were determined through laparotomy on 10th and 20th day of pregnancy, respectively in two tests. The treated groups were compared with pain control.

Results A significant increase in duration of estrus cycle and diestrus phase was observed ($P < 0.001$). A significant decrease in ovarian weight and notable increase in ovarian tissue cholesterol level was also observed ($P < 0.001$). Weight of uterus in treated group was found to be decreased. Histological report showed presence of large corpora lutea in ovarian parenchyma. Neither antiimplantation nor abortifacient effect was observed in rats treated with both the doses of extract.

Conclusion Hydroalcoholic extract of *Ocimum basilicum* interferes normal ovulation by disrupting the estrus cycle and prolonging diestrus phase thus, has a potential of being developed into a female contraceptive.

Key words: herbal contraceptive; ovulation; implantation; cholesterol; estrus cycle; vaginal smear; rats

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