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### Effects of methanolic extract of *Asparagus pubescens* root on sexual behavior and pituitary hormone secretion on Wistar rats during pregnancy and lactation.

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#### Abstract

We investigated the effect of methanolic extract of *Asparagus pubescens* root on sexual behavior and on pituitary hormone secretion during pregnancy and lactation on Wistar rats. Different doses (0.25, 0.5, 1.0 and 1.5g/kg) of the extract, given in a single bolus dose or in four (divided) daily injections (0.0625, 0.125, 0.25 and 0.375 mg/(kg day)), inhibited sexual behavior when given to proestrous females in a dose-dependent manner, with the high doses (1.0-1.5g/kg) inhibiting significantly the lordosis quotient. All treated females showed aggressive behavior towards the males to a similar extent irrespective of dose. Fertilization rate, pregnancy, delivery and litter size were normal. Birth weight and growth rates of the pups were also unaffected indicating no deleterious effects of extract on offspring development. The extract had significant effects on preovulatory luteinizing hormone (LH), prolactin (PRL) and progesterone (P4) release. Divided doses of 1.0 and 1.5g/kg significantly decreased preovulatory LH, PRL and P4 release. Administration of 0.5 or 1.5g/kg in bolus dose, produced significant inhibition of preovulatory LH and PRL while 1.5g/kg had no effect. Progesterone was not modified while 1.0g/kg dose caused a decrease in GH. 0.25g/kg produced a paradoxical increase in preovulatory PRL secretion, also seen on day 4 of pregnancy. During pregnancy, both dose regimens were effective in inhibiting the afternoon peaks in prolactin secretion at all dose levels with the exception of 0.25g/kg. There were no effects on the second half of pregnancy or on the suckling-induced PRL release on day 3 postpartum. Circulating GH was scarcely affected on day 3 postpartum. All the results taken together, indicate that the contraceptive effects of the extract may be exerted through interference with neural mechanisms that control preovulatory hormone release and sexual behavior.

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