

Androgenic and Spermatogenic Activity of Alkylamide-Rich Ethanol Solution Extract of *Anacyclus Pyrethrum* Dc

Authors : Vikas Sharma, V. K. Dixit

Abstract : *Anacyclus pyrethrum* (A. pyrethrum) has been used as Vajikaran Rasayana (aphrodisiac) in traditional Indian ayurvedic medicine to treat male sexual dysfunction, including infertility. Aphrodisiac activity may be due to an increase in the production or effect of androgens, so this study sought to evaluate the androgenic and spermatogenic potential of the alkylamide-rich ethanol solution extract. Male Wistar strain rats weighing between 150 and 180 g were completely randomized divided into five groups. The ethanol solution extract of A. pyrethrum was administered to groups of rats in 50, 100, and 150 mg/kg doses for a period of 28 days, and the action was compared with control and testosterone-treated rats. Thirteen N-alkylamides were detected in the extract by using HPLC/UV/electrospray ionization mass spectrometry method. Extract administration at all the doses produced significant increase in body weight, sperm count, motility, and viability along with serum testosterone, luteinizing hormone, and follicle-stimulating hormone concentrations. Histoarchitecture of testis revealed increased spermatogenic activities. Seminal fructose content was also significantly increased after 28 days of treatment. Our results suggest that the ethanol solution extract of the roots of A. pyrethrum has androgenic potential and may improve male fertility by enhancing spermatogenesis.

Keywords : N-alkylamides, testosterone, *Anacyclus pyrethrum*, androgen

Conference Title : ICPSE 2015 : International Conference on Pharmaceutical Science and Engineering

Conference Location : Venice, Italy

Conference Dates : August 13-14, 2015