



Research article

## The Protective effects of chlorophytum borivilianum on Nicotine-induced reproductive toxicity, oxidative damage, histological changes and haematotoxicity in male rats

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### Abstract

**Objectives:** Nicotine (NIC), a major constituent of cigarette, adversely affects male reproductive hormones, sperm indices and fertilizing potential. Chlorophytum borivilianum (Chlb), known as “white gold” in Indian Ayurveda, improves male reproductive performance. The present study was conducted to assess whether Chlb roots alcoholic extract could serve as a protective agent against NIC-induced reproductive toxicity in rats. **Material and method:** 24 adult Wistar male rats were randomly divided into 4 groups : 1) Control 2) Nicotine 3) Root extract of Chlb and 4) NIC + Chlb extract. Sperm indices, Gonadotrophic hormones LH & FSH, and testosterone as well as anti oxidant capacity were measured. **Result and conclusion:** Intraperitoneal injection of NIC (3mg/kg body weight) for 21 days showed significant reduction in testicular weight, sperm count, motility, serum level of LH, FSH, testosterone and testicular endogenous antioxidant. The above- mentioned parameters were restored by Chlb co-administration. The findings indicate that Chlb may potentially be protective against NIC-induced testicular toxicity.