IMMUNOMODULATORY EFFECT OF FRESH JUICE OF B*ambusa vulgaris* YOUNG SHOOTS

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The therapeutic potential of bamboo has been validated amply though the immunomodulatory potential has been scarcely evaluated. The present study investigates the immunomodulatory potential of *Bambusa vulgaris* for developing potential drug leads in the future. The immunomodulatory potential of fresh juice of *Bambusa vulgaris* young shoots (FJBV) using Wistar rats (N=6/group), orally administered with 3 doses of FJBV - low dose (LD-0.25 ml) 400 mg/kg, human equivalent dose (HED-0.5 ml) 800 mg/kg and high dose (HD-1 ml) 800 mg/kg - once daily for 2 consecutive days while distilled water was used for normal control (NC). Cyclophosphamide via oral route for positive control (PC-1ml) 10 mg/kg. Prescribed traditional dose (30 ml/day) was used to determine HED. Non-functional and functional immunological parameters elicited a significant immunomodulation with FJBV. Lymphocyte to neutrophil ratio was significantly low for LD ($p<0.05$). Rat platelet counts and bone marrow counts were reduced for all three doses at post-treatment testing. Among them, significant platelet reduction was observed by HD ($p<0.05$) and for bone marrow by both HED and HD ($p<0.05$). Contrary, splenocyte counts were increased for all three doses of FJBV and a significant increment was observed for HD ($p<0.05$). Functional response for phagocytic activity was lowered due to FJBV doses and significantly lowered for HED and HD ($p<0.05$). Acute oral toxicological evaluation of FJBV challenges the safe administration of fresh juice for a longer period since it was implicated with a nearly significant haematotoxicity, and immunotoxicity. The findings of the present study provide ample verification of the traditional claim and health benefits of the FJBV young shoots as an immunomodulator.

Keywords: Immunomodulatory, *Bambusa vulgaris*, Acute Toxicity, Functional and non-functional

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