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Oral ingestion of *Spondias pinnata* bark extract trim down severity of small intestinal mucositis in etoposide treated rats: Histological sequelae

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Chemotherapy-induced diarrhea (CID) is a common side effect of cancer treatment and can cause significant morbidity and mortality. Rat mucositis model was developed by injecting single dose of etoposide (i.p) and treated with *S. pinnata* bark extract (100 & 200 mg/kg body wt.) for next 72 hrs. Treatment efficacy was determined by changes in the intestinal morphology and biochemical parameters such as intestinal GSH, Sucrase, NO, MPO and Interleukin-6 (IL-6) after 72 hr, with and without intervention. There was a significant decrease in reduced glutathione, sucrase and IL-6 levels and a significant increase in NO and MPO activities in intestinal tissue after etoposide injection. However, in the post treatment groups (in both 100 & 200 mg), reduced glutathione, sucrase and IL-6 levels reverted back to that of normal. NO levels reverted to normal levels in response to 100 mg/kg body wt. of *S. pinnata* extract; however it remained high in the group treated with 200 mg/kg body wt. MPO levels showed least response to the intervention during the study. Histological studies showed a good response to *S. pinnata* bark extract intervention. The results suggest that *S. pinnata* bark extract has some potential to prevent the toxic effects of etoposide which expedites to mucositis.

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