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Toxicological evaluation of aqueous extract of Aloe ferox Mill. in loperamide-induced constipated rats.

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Abstract

Aloe ferox Mill. is a widely used medicinal plant in South Africa for the treatment of many ailments including constipation. The present study evaluated the toxicological effect of aqueous leaf extract of the herb at 50, 100 and 200 mg/kg body weight for 7 days on the haematological parameters as well as liver and kidney function indices in loperamide-induced constipated rats. The extract did not cause any significant ($p > 0.05$) effect on the kidney and liver-body weight ratio as well as the kidney function indices including serum levels of creatinine, uric acid, urea, calcium and potassium ions at all the dosages investigated. Whereas the serum levels of total protein, albumin, bilirubin and gamma glutamyl transferase (GGT) were not affected, the elevated activities of alkaline phosphatase (ALP), alanine transaminase (ALT) and aspartate transaminase (AST) in the untreated constipated animals were normalized following treatment with extract. The data obtained with respect to the haematological analysis indicated that the extracts had no significant ($p > 0.05$) effect on the haematological parameters with the exception of lymphocyte count which was increased in the untreated constipated rats. This was however attenuated after administering the herb. The available evidence in this study suggests that A. ferox may be safe as an oral remedy for constipation. Generally, the effect of the extract compared favourably well with senokot, a recommended drug for the treatment of constipation.

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