Abstract
The present study was designed to investigate the effects of a selective COX-2 inhibitor, etoricoxib in rats on the hematological and toxicity parameters in colon and kidney at two different doses of the drug, one within the therapeutic anti-inflammatory range as based on the reported ED50 value (Eto-1) while the other at ten times higher (Eto-2), relative to the toxicity studies which have not been reported so far. The results showed that the control and the drug treated animals achieved similar linear growth rate and also showed no major alterations in the histological parameters in the liver and kidney tissue. The animals treated with lower dose of etoricoxib showed an overall decrease in total leukocytes counts as well as in the number of neutrophils, lymphocytes, monocytes and eosinophils while the higher dose of the drug produced a highly significant increase in all the cell counts. However, the drug treatment at both the dose level produced significant fall in the activities of alkaline phosphatase, sucrase, lactase and maltase in the kidney but increased the activity of alkaline phosphatase in colon. The treatment of etoricoxib did not produce any change in the nitric oxide and citrulline levels in kidney while an increase was noted in the colonic tissue. It was concluded that etoricoxib is a relatively safe drug at its anti-inflammatory ED50 dose in rats when the hematological parameters and the structural and functional characteristics of kidney and colonic tissues were studied.

Keywords

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