

Hepatoprotective action of zerumbone against paracetamol induced hepatotoxicity.

ABSTRACT

This study is conducted to investigate the possible effect of zerumbone towards hepatoprotective activity against paracetamol intoxication. Male Sprague-Dawley rats were randomly divided into six groups consisted of 3-5 animals. Group I was administered with 0.2% zerumbone for 14 days prior to 3 g kg⁻¹ paracetamol administration. Group II was given paracetamol early and group III was given 200 mg kg⁻¹ of silymarin and paracetamol. Group IV was administered with zerumbone only and finally group V was treated with corn oil and 40% sucrose buffer as vehicle treated group. Animals were sacrificed at 4 and 24 h post treatment following diethyl ether. There was no significant changes in liver enzyme activities as well as histological observations at 4 h after paracetamol administration. Meanwhile, 24 h after paracetamol administration, the level of alanine aminotransferase (ALT), aspartate aminotransferase (AST) and alkaline phosphatase (ALP) were found to be reduced in rats that were pretreated with zerumbone compared to group that was treated with paracetamol only. Correspondingly, there was no hepatocellular necrosis observed in rats that were pretreated with zerumbone. The results obtained may have suggested that zerumbone exert hepatoprotective activities against paracetamol induced hepatotoxicity.

Keyword: Acetaminophen; Hepatotoxicity; Paracetamol; Zingiber zerumbet.