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Liver protective activity of a hydroethanolic extract of Arrabidaea chica (Humb. and Bonpl.) B. Verl. (pariri)

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ABSTRACT

Background Folk medicine uses preparations of Arrabidaea chica (pariri) leaves to treat various liver pathologies. We evaluated the effects of the hydroethanolic extract of these leaves (CHEE) on an in vivo model of liver intoxication. Materials and Methods Different groups of rats were treated orally for 7 days with CHEE at doses of 300, 500 or 600 mg/kg or silymarin at 35 mg/ kg. The control group received only 0.5 ml of distilled water. After 7 days of treatment, both the groups received CCl4, and activities of glutamic pyruvic transaminase (GPT), glutamic oxaloacetic transaminase (GOT) and bilirubin level were assessed. The ability of CHEE to suppress hepatic injury triggered by CCl4 was evaluated based on suppression (%) of activities of GOT, GPT and bilirubin levels. Results The chromatograms of the CHEE obtained at 330 and 400 nm show features of two main classes of secondary metabolites: quinones and flavonoids. The administration of 300, 500 or 600 mg/kg of CHEE resulted in the reduction of GPT levels by 85.34%, 88.59% and 93.72%, respectively. The suppression of GOT levels was 56.86%, 65.27% and 68.95%, respectively, and that of plasma bilirubin was 83.81%, 83.12% and 84.14%, respectively. These results demonstrate the protective character of CHEE and its ability to maintain the functional integrity of hepatic cells. Conclusions The results obtained are possibly due to the presence of quinones and flavonoids in A. chica CHEE, both detected using high performance liquid chromatography.

KEYWORDS

Arrabidaea chica . carbon tetrachloride . flavonoids . hepatic protection . quinones

REFERENCES