SUMMARY

Hepatic encephalopathy (HE) is a common complication that affects 28% of patients with liver cirrhosis and reported to happen up to ten years after the diagnosis of cirrhosis. A number of theories have been proposed to explain the development of hepatic encephalopathy in patients with cirrhosis. The most important one is the hyperammonemia theory.

In the present study, an experimental model of hepatic encephalopathy was induced in guinea pigs by intraperitoneal injection of thioacetamide in a dose of 300 mg/kg/d for 3 days.

Conscious level was evaluated daily; arterial blood pressure was measured invasively; fasting (for at least 12 hours) blood samples were withdrawn from portal and hepatic veins for estimation of portal ammonia, hepatic ammonia, HER, ALT, AST and creatinine; and Liver and brain were studied histopathologically by light microscopic examination using hematoxylin and eosin stains.

The present study was conducted to clarify and compare the prophylactic as well as the therapeutic effects of *Hibiscus sabdariffa* against hepatic encephalopathy. It was given daily in a dose of 250 mg/kg/d orally simultaneous with intraperitoneal thioacetamide 300 mg/kg/d for 3 days in the prophylactic group while in therapeutic group intraperitoneal thioacetamide (300 mg/kg/d) was given for 3 days then followed by daily oral *Hibiscus sabdariffa* (250 mg/kg/d) for another 3 days.

Hibiscus sabdariffa **showed both prophylactic and therapeutic effects** on thioacetamide-induced hepatic encephalopathy in guinea pigs but had a more prophylactic than therapeutic action in improving the conscious level, decreasing the hepatic vein ammonia, increasing the hepatic extraction ratio and decreasing AST and ALT levels. However the therapeutic action was found to be superior compared to the prophylactic action in ameliorating the brain edema.