Hepatoprotective activity of methanol extract of Melastoma malabathricum leaf in rats

ABSTRACT

The present study aimed to determine the hepatoprotective activity of a methanol extract of Melastoma malabathricum leaves (MEMM) using two established rat models. Ten groups of rats (n = 6) were given a once-daily administration of 10% dimethyl sulfoxide (negative control), 200 mg/kg silymarin (positive control), or MEMM (50, 250, or 500 mg/kg) for 7 days followed by induction of hepatotoxicity either using paracetamol or carbon tetrachloride. Blood samples and livers were collected for biochemical and microscopic analysis. Based on the results obtained, MEMM exhibited a significant (p < 0.05) hepatoprotective activity against both inducers, as indicated by an improvement in the liver function test. These observations were supported by the histologic findings. In conclusion, M. malabathricum leaves possessed hepatoprotective activity, which could be linked to their phytochemical constituents and antioxidant activity; this therefore requires further in-depth studies.

Keyword: Hepatoprotective activity; In vivo; Leaves; Melastoma malabathricum; Melastomaceae; Methanol extract