Subacute oral toxicity assesment of ethanol extract of Mariposa christia vespertilionis leaves in male sprague dawley rats

ABSTRACT

The term Butterfly tea refers to decoction of Mariposa christia vespertilionis leaves which is widely consumed by cancer patients throughout Malaysia and has gained a huge popularity among Malaysians, not only cancer patients but also researchers to discover the real potential of this plant. Herein, the study is aimed at evaluating the possible toxicity in 28-day subacute oral toxicity of ethanolic extract M. christia vespertilionis in male Sprague Dawley rats. The 28-day subacute toxicity study was conducted to detect the no-observed adverse effect level (NOAEL). In this study, a total of 30 rats were divided into the control, 5% DMSO (vehicle), low dose (75 mg/kg), medium dose (125 mg/kg) and high dose (250 mg/kg) groups. The extract was administered daily from day 1 until day 28. At the end of the study, the animals were humanely sacrificed and assessed for the effect extract of Mariposa christia vespertilionis leaves on body weight and relative organ weights and haematological, biochemical and histopathological parameters. The haematological and serum biochemical parameters for the assessment of kidney and liver injuries were carried out. Results of haematological and serum biochemistry results showed no changes in the control and treated groups. In the histopathology, evaluation of kidney tissues in all treated groups showed no significant ($p > 0.05$) lesions. In contrast to kidney, liver tissues showed significant differences ($p < 0.05$) in lesions observed in low dose (430 mg), medium dose (700 mg) and high dose (1480 mg) groups with very mild, mild and mild to moderate lesion of hepatic necrosis, in the respective groups, and very mild hepatic degeneration and hepatitis were scored in all three groups.

Keyword: M. christia vespertilionis; Subacute oral toxicity; NOAEL; Ethanolic extract