

Title :Ameliorative effect of 5–methoxyflavone on vincristine induced peripheral neuropathy in mice

Abstract

Flavonoids have been shown to possess antinociceptive effect mediated through the ionotropic GABAA receptors. In the present study,5-methoxyflavone was evaluatedfor ameliorative effect on vincristine induced peripheral neuropathy in mice. Peripheral neuropathy was induced by treating vincristine (0.1 mg/kg, i.p) once per day for 7 days. Administration of 5–methoxyflavone (50 mg/kg, i.p) significantly reduced the paw withdrawal response score in animals that developed cold allodynia due to vincristine treatment ($p < 0.01$). 5–methoxyflavone did not show significant withdrawal response with hair aesthesiometer in mechanical allodynia test. A significant and dose-dependent increase in the latency time to thermal response was observed after 5–methoxyflavone treatment in mice ($p < 0.01$). In conclusion, the present study has identified a novel and potential therapeutic utility of 5–methoxyflavone in the treatment of vincristine induced neuropathic pain.

Keywords: 5-methoxyflavone;vincristine; nociception; peripheral neuropathy;

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