

## ABSTRACT

# THE EFFECT OF QUERCETIN ON MICE OF OXALIPLATIN AND PACLITAXEL- INDUCED PERIPHERAL NEUROPATHY

Chemotherapy-induced peripheral neuropathy is a debilitating side effect that occurs in patients undergoing chemotherapy. Oxaliplatin is a third generation platinum analogue that induce acute neuropathy beginning with injury to peripheral nociceptive fibers caused by neural apoptosis. Quercetin is well known as polyphenolic antioxidant agent that potentially exhibit the neuroprotective activity on neurological disease. The aim of this research was to investigate the effect of antioxidant quercetin on curing peripheral neuropathy caused by oxaliplatin. Mice were divided into five groups. Oxaliplatin ,3 mg/kg, i.p., or paclitaxel, 4 mg/kg, i.p. was administered to mice at day 0, 2, 4, 6 to induced peripheral neuropathy. From day 7, quercetin 100, 150, or 200 mg/kg was administered for 8 consecutive days. Mice were assessed for neuropathy pain using hot plate test in 52°C at day 1, 3, 5, 7, 10, 14, 18 and 22. The result showed oxaliplatin and paclitaxel induce thermal hypoalgesia. The decrease in paw withdrawal latency was ameliorated by quercetin 100, 150 and 200 mg/kg showed at day 7 until 22. This study suggest that quercetin has neuroprotective effect on different dose showed distinctive effect on paw withdrawal latency.

**Keyword** : Oxaliplatin, Paclitaxel, CIPN, Quercetin