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## 低能雷射對於化療藥物引起異常疼痛的影響

### The Effects of Low-level Laser Therapy on Chemotherapy-induced Allodynia in Rats

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**Background and Purpose:** Oxaliplatin, a platinum-based chemotherapeutic agent, causes an unusual acute peripheral neuropathy with symptoms including cold sensitivity and neuropathic pain. Many studies have demonstrated that low-level Laser Therapy (LLLT) is an effective physical modality for neuropathic pain and allodynia. However, there is few data to conduct the effect of LLLT on chemotherapy-induced pain and allodynia. In this study, the effects of LLLT on oxaliplatin-induced allodynia were assessed on pain behaviors in rats. **Methods:** Sprague Dawley rats (350-400 gw) were treated with a single dose of oxaliplatin (4 mg/kg, i.p.) on three alternate days to induce sensory allodynia. Four hours later at oxaliplatin-induced acute neuropathy phase, LLLT (4.5 J/cm<sup>2</sup> of energy density) irradiated at the allodynic limbs for consecutive 12 days. The anti-allodynic effects of LLLT were assessed by using cold and von Frey tests. **Result:** Oxaliplatin-induced cold and mechanical allodynia were alleviated after LLLT. **Conclusions:** These results suggested that LLLT attenuates oxaliplatin-induced allodynia by increasing the threshold of cold and mechanical sensitivity. **Clinical Relevance:** We conclude that administration of LLLT may reduce allodynia in cancer patients treated with chemotherapy.

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