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Facial partial unilateral lentiginosis treated with low-fluence Q-switched 1,064 nm neodymium-doped yttrium aluminum garnet laser

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Partial unilateral lentiginosis (PUL) is an unusual pigmentary disorder characterized by numerous lentigines grouped within an area of normal skin. Although treatment is not necessary, many patients with facial PUL seek medical help for cosmetic reasons. There is no established standard treatment for PUL. Conventional lasers may cause post-inflammatory hyperpigmentation because keratinocytes are injured during the process. Also scarring, long downtime and pain are important issues. A 19-year-old patient with facial PUL was successfully treated with low fluence 1064 nm Q-switched 1,064 nm neodymium-doped yttrium aluminum garnet (QS Nd:YAG) laser. Although the exact mechanism by which low fluence 1,064 nm QS Nd:YAG laser improves pigmentary lesions is unclear, the term "subcellular selective photothermolysis" and "melanocyte apoptosis and replacement" have been proposed. If appropriate measures are taken to monitor patient response during and after the procedure, low fluence 1064 nm QS Nd:YAG laser may achieve good cosmetic result in the treatment of PUL with a very safe and effective profile.

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Cupressus sempervirens extract inhibited human basal cell carcinoma tumorigenesis, local invasion and angiogenic property

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Background: Basal cell carcinoma, a noninvasive and rarely metastatic tumor, with clinical and histological involvement of basal epithelial cells occurred due to dis-regulation of Hedgehog-patched1 signaling pathway.

Objective: The current study was conducted to evaluate the in vitro cytotoxic effects of *Cupressus sempervirens* methanolic extract against primary basal cell carcinoma cells, over a period of 48 h.

Methods: We measured the increased levels of annexin-V as well as lactate dehydrogenase leakage in cells being-exposed to 420 µM extract. In addition to transcript levels of PTCH-1 of Hedgehog-patched1 signaling pathway, angiogenic activity of vascular endothelial growth factor and angiopoietin-2, and metastatic levels of matrix metalloproteinase 2 and 9.

Results: The cytotoxicity test results showed that BCC cells survival decreased dose-dependently through 48 h. The expression of Annexin-V was induced ($p<0.05$) in treated cells which coincided with raised levels of lactate dehydrogenase leakage in supernatant media ($p<0.05$). Noticeably, the expression of PTCH-1, vascular endothelial growth factor, angiopoietin-2 and matrix metalloproteinase 2 and 9 were robustly decreased. Interestingly, 6-month clinical trial follow-up of *Cupressus sempervirens* extract 5% ointment showed antitumor activity against cutaneous basal cell carcinoma by the reduction of tumor and inflammatory cells replaced with development of fibrotic stroma.

Conclusions: The data of present experiment may suggest that the methanolic extracts of *Cupressus sempervirens* possess oncostatic and cytotoxic properties, and therefore, can be prescribed as natural protective and therapeutic ingredients for basal cell associate cutaneous tumor.

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