

Medical > In Vivo > Other material

56

The assessment of pulsed dye laser treatment of port-wine stains with reflectance confocal microscopy.

Ren J, Qian H, Xiang L, Pan Z, Zhong L, Yan S, Gold MH., *J Cosmet Laser Ther.* 2013 Dec 14.

ABSTRACT

BACKGROUND: Reflectance confocal microscopy (RCM) is a noninvasive technique for evaluating cutaneous lesions with cellular level resolution close to conventional histopathology. The aim of this study is to observe the vascular changes in Port-wine (PWS) lesions and assess the clinical efficacy of Pulsed Dye Laser (PDL) treatment by examining vessel diameter and density with RCM. **MATERIAL AND METHODS:** Eleven adult patients with PWS, each had four test patches carried out with different pulse durations (1.5, 3, 6, and 10 ms), respectively; fluences of 9-12 J/cm²; and a spot size of 7 mm. The PDL treatment was repeated 3-5 times at a 2-month interval. Photographs and measurements with RCM were taken before each treatment and 2 months after the last treatment. **RESULTS:** The PDL treatment exhibited increasing clearance with reducing pulse durations. Vessel diameters and densities were significantly decreased in the same pulse-duration groups after treatment. There was significant difference between 1.5 ms pulse-duration group and other pulse-duration groups in reducing blood vessel diameter at the depth of 150 μm. **CONCLUSION:** RCM can be used to assess the clinical efficacy of PDL treatment.