

Cosmetic & Pharmaceutical Research > Cosmetic & Pharmaceutical Research > Laser Treatment

12

Time-sequence histologic imaging of laser-treated cherry angiomas with in vivo confocal microscopy.

Aghassi D, Anderson RR, González S.; J Am Acad Dermatol. 2000 Jul;43(1 Pt 1):37-41.

ABSTRACT

OBJECTIVE: To chronicle the pathophysiologic changes that occur subsequent to laser treatment of vascular lesions, we used a confocal scanning laser microscope that yields high-resolution microscopic images of skin in vivo.

METHODS: Cherry angiomas were treated with the 585-nm flashlamp-pumped pulsed-dye laser (PDL) and the 568-nm continuous-wave krypton laser.

Repeated confocal reflectance imaging was performed before and immediately after treatment, as well as after several hours, 1 day, 2 days, 1 week, 2 weeks, 3 weeks, and 4 weeks.

RESULTS: Before treatment, confocal images revealed dilated blood vessels ranging from 10 to 50 microm in caliber, closely spaced at 5 to 50 microm apart. After PDL treatment, amorphous cords of refractile material conformed to the shape of the original vessels, followed by dark nonrefractile spaces where the vessels once were. Inflammation and necrosis ensued, with eventual replacement after 3 weeks by normal-appearing skin.

After krypton laser treatment, dark nonrefractile spaces appeared immediately, with subsequent inflammation, necrosis, and eventual healing by 4 weeks.

CONCLUSION: Confocal laser microscopic imaging elucidates the dynamic pathophysiologic events that occur after laser treatment of vascular lesions and has added insight into the different mechanisms of vessel damage induced by the PDL and krypton laser.