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### Elucidating the pulsed-dye laser treatment of sebaceous hyperplasia in vivo with real-time confocal scanning laser microscopy.

Aghassi D, González E, Anderson RR, Rajadhyaksha M, González S.; *J Am Acad Dermatol.* 2000 Jul;43(1 Pt 1):49-53.

#### ABSTRACT

**BACKGROUND:** Several case reports document successful treatment of sebaceous hyperplasia with the pulsed-dye laser.

Moreover, noninvasive real-time confocal laser scanning microscopy elucidates the vascular nature of these lesions and their pathophysiologic response to treatment mediated by vessel coagulation.

**METHODS:** Ten patients with 29 lesions of sebaceous hyperplasia were treated with 3 stacked 5-mm pulses of the 585-nm pulsed-dye laser at fluences of 7 or 7.5 J/cm<sup>2</sup>. Confocal imaging was performed before and immediately after treatment, as well as at 2, 4, and 8 weeks of follow-up.

**RESULTS:** The great majority of lesions responded to one treatment, with complete disappearance in 28%, decrease in diameter in 66%, and flattening in 93%. Although 28% recrudesced after initial involution, only 7% recurred completely.

Three lesions became eroded or crusted, and 7 experienced cutaneous depressions before complete healing, but no scarring or pigmentary side effects were noted.

Confocal imaging revealed a prominent "crown" of blood vessels surrounding the sebaceous duct and coagulation of these vessels with pulsed-dye laser treatment.

However, the vessels reappeared during follow-up, and no noticeable morphologic changes in the sebaceous duct were noted.

**CONCLUSION:** Vascular targeting of sebaceous hyperplasia can be monitored with real-time reflectance confocal microscopy.

Most sebaceous hyperplasia regresses after one treatment with 3 stacked pulses of the 585-nm

pulsed-dye laser.

Whether this response is due to temporary ischemia induced by selective vessel destruction or nonspecific thermal diffusion beyond the vessels from pulse stacking has not been determined.