Treatment of sebaceous hyperplasia using Er: YAG (2940) nanometer laser.

A DISSERTATION
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Abstract

Treatment of sebaceous hyperplasia using Er: YAG 2940 nm laser.

A study for treating 15 case of sebaceous hyperplasia using solid state Er:YAG 2940 nm laser device. All the lesions present on the face of the patients (per orbital area, upper cheeks, & forehead).

The chromophore is the water which had maximum absorption for wave length more than 2 microns (infrared region of spectrum) where the Er:YAG 2.94 microns wave length laser used.

The power output used for the device (Energy = 400 milli Joules, Frequency = 5 Hertz, Pulse duration = 300 millisecond, & spot size = 0.7 millimeter), giving (Peak power = 1.33 Watts, Average power = 2 Watts, Power density = 33.2 Watts/cm^2, Fluence = 100 Joules/cm^2).

By non contact method with indicator of red diode 810 nm laser applications of laser chopped pulses to the lesions caused generation of heat inside it that lead to vaporization of the cells & end with ablation of the lesions layer by layer under control of vision & by foot switch control till got complete removal of the lesion.

Each lesion treated by one session & followed for 3-4 weeks by one week interval, were found after that 98.6% of patients got healing completely without scar at site, & 1.4% got mild scaring in the form shallow depression at site of operation.

Conclusion that solid state Er:YAG 2940 nm laser therapy for sebaceous hyperplasia is; effective, rapid, scar less, & superior to other conventional methods.