



DERMATOPATHOLOGY

LASER MEDICINE AND DERMATOPATHOLOGY – RECOGNIZING MORPHOLOGICAL SKIN PARAMETERS UNDER LASER TREATMENT (A PATHOLOGIST'S VIEW)

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Background: Laser Medicine withholds an important role in dermatology, ranging from purely esthetic to functional roles. Diverse therapeutical modalities of laser are available, from purely ablative, as Erbyum to semi-ablative, as Nyobium and mixed ones, as those associated to microneedling. Dosage concentration is also an important factor for the effect on tissue, as well as for the recognition of morphological markers of action. In this pictorial assay, we will point some tissue characteristics that can help recognize the therapeutic modality. The recognition of such patterns has medical and legal utilities.

Observations: Purely ablative treatments evidence a broad range of collagenic disruption, from slightly eosinophilic and dense collagenic fibers at low dose to dense collagenic damage, as fibers become thick, dense, basophilic, discontinuous and spaced. Microneedling evidences well organized spherical hemorrhagic areas, devoid of dermal component, with surrounding collagenic damage, if employed as a mixed laser therapeutic modality. Picro-Sirus under polarized light, Masson trichome, Reticulin, Verhoeff, Collagen Immunohistochemistry, Ki-67 and 3D histologic reconstruction are also tools that can be employed for histopathological evaluation and comparison of treatment effectivity.

Key points: Medical training in dermatopathology does not cover esthetic therapy or specimens related to esthetic treatments. In medical and legal terms, the recognition of these diagnostic landmarks has its importance, as well as the development of scientific embased evaluation methods to compare different modalities of treatment, as covered in this exposition.

