Morphological changes of the skin following microdermabrasion and chemical peeling

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ABSTRACT

Microdermabrasion and chemical peeling cause manifestations of skin injury and inflammation. These changes include cytoplasmic vacuolations, increased intercellular spaces, paucity of desmosomes among epidermal cells and increased number of Langerhans cells. Collagen bundles of abnormal periodicity and high micro vessel density and angiogenesis were also demonstrated.

In general, manifestations of cell injury are minimal while those of wound healing are more pronounced in microdermabrasion. This is may be attributed to the fact that microdermabrasion is an abrasive technique targeting the superficial layers of the epidermis without affecting the deeper layers and this explains that most effectiveness of this modality is in repairing superficial lesions such as fine lines, superficial scars and early photo aging. Chemical peeling is classified as superficial, medium and deep peels. The depth correlates with the histological changes, being mostly in deep peels. Chemical peeling is classified as superficial, medium and deep peels. The depth correlates with the histological changes, being mostly in deep peels.

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