

Evaluation of the histologic changes in the fat-grafted facial skin: clinical trial.

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Abstract

BACKGROUND:

Fat grafting is increasingly common in plastic surgery procedures. The discovery of stem cells in fat tissue has given a new direction to the use of fat as a therapeutic tool for other patient conditions. Only one experimental study in rats shows dermal changes after application of lipofilling. For this reason, the authors conducted this study to evaluate skin changes in patients after application of the technique. This study aimed to observe histologic changes in the skin of patients undergoing fat grafting.

METHODS:

Fat grafting was performed in the preauricular region on one side of patients undergoing face-lifts at the Jalisco Reconstructive Surgery Institute, Guadalajara, Mexico. Preauricular skin was used in this procedure as a withdrawal study and control condition. Hematoxylin-eosin and Masson staining was performed to assess dermal and epidermal thickness, vascularity, and collagen behavior. No inferential statistics were registered with the Wilcoxon test.

RESULTS:

The study investigated 16 patients to observe statistically significant differences in dermal thickness, the presence of immature collagen (neof ormation), and arteries. No difference in epidermal thickness was observed.

CONCLUSIONS:

The study showed a regenerative effect with fat grafting that included an increased thickness of the dermis, collagen neof ormation, and the presence of increased vascularity in local skin subjected to treatment.

LEVEL OF EVIDENCE II:

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