

Face Rejuvenation
By
Autologous Fat Injection Versus Synthetic
Fillers

Thesis

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List of Abbreviations

SMAS.....superficial musculo aponeurotic system.

HLA.....hyaluronic acid.

ABSTRACT

This is a comparative Study to emphasize the role of fat injection versus the synthetic fillers in face rejuvenation as regards to which area of the face will be injected wheather by fat or fillers to give the best cosmetic result ,technique of injection,diifferent types of fillers and complication rate to determine which technique is more appropriate for each patient needing this type of procedure.

Key Words:face rejuvenation- fillers- fat injection face- non surgical
facial rejuvenation- hyalaronic acid fillers

introduction

Rejuvenation of the aging face has always been an integral part of facial plastic surgery. The aging face is characterized by macroscopic and microscopic changes. Some of the macroscopic changes include the formation of jowls, melolabial folds, and tear-trough deformities. Other changes in facial appearance include bone and soft-tissue volume depletion, changes in skin quality, and the downward gravitational pull of facial musculature and soft tissue. Large macroscopic changes can be counteracted by surgery, such as facelifts and midface lifts. Filler agents have a specific role in combating facial aging changes to augment surgical results and offer real benefits in patients with lesser degrees of aging not yet conducive to invasive procedures. (*Raghu S.,2007*).

Injectable fillers entered mainstream cosmetic medicine with the development of bovine collagen injections in the 1980s. The availability of improved fillers that are less allergenic and longer lasting has resulted in a renaissance in filler techniques. No single filler has proven to be more popular than the category of hyaluronic acids (HA). This article will review the use of the hyaluronic acid fillers that are currently approved for use by the Federal Drug Administration in the United States and describe the significant differences between them to assist the practicing cosmetic physician in choosing and using this category of dermal filler. (*Lupo 2006*).

Fat augmentation is safe, facial aging is not simply due to gravity but also to atrophy of tissues, the use of inexpensive, and readily available. Now that fat for volume restoration is becoming even more popular. Newer techniques of Lipostructure, facial fat rebalancing, and fat autograft muscle injection are targeted to achieve true full-face three dimensional rejuvenation. (*Butterwick ,2007*).

Soft-tissue augmentation of the face is an increasingly popular cosmetic procedure. In recent years, the number of available filling agents has also increased dramatically, improving the range of options available to physicians and patients. Understanding the different characteristics, capabilities, risks, and limitations of the available dermal and subdermal fillers can help physicians improve patient outcomes and reduce the risk of complications. The most popular fillers are those made from cross-linked hyaluronic acid (HA). A major and unique advantage of HA fillers is that they can be quickly and easily reversed by the injection of hyaluronidase into areas in which elimination of the filler is desired, either because there is excess HA in the area or to accelerate the resolution of an adverse reaction to treatment or to the product. In general, a lower incidence of complications (especially late-occurring or long-lasting effects) has been reported with HA fillers compared with the semi-permanent and permanent fillers. The implantation of nonreversible fillers requires more and different expertise on the part of the physician than does injection of HA fillers, and may produce effects and complications that are more difficult or impossible to manage even by the use of corrective surgery. Most practitioners use HA fillers as the foundation of their filler practices because they have found that HA fillers produce excellent aesthetic outcomes with high patient satisfaction, and a low incidence and severity of complications. Only limited subsets of physicians and patients have been able to justify the higher complexity and risks associated with the use of nonreversible fillers. (*Smith KC.2008*).

Hyaluronic acid fillers have become popular soft tissue filler augmentation agents over the past several years. They have helped revolutionize the filler market with a number of new products available for use for our patients. (*Gold MH.2007*).

Aim of work

This is a comparative Study to emphasize the role of fat injection versus the synthetic fillers in face rejuvenation as regards to which area of the face will be injected wheather by fat or fillers to give the best cosmetic result ,technique of injection,different types of fillers and complication rate to determine which technique is more appropriate for each patient needing this type of procedure.

CHAPTER 1

ANATOMICAL AND

HISTOLOGICAL PROSPECTIVE OF

THE FACE

Anatomical & Histological Prospective Of The Face

There are five layers of critical anatomy: skin; subcutaneous fat; the superficial musculoaponeurotic system (SMAS)—muscle layer; a thin layer of transparent fascia; and the branches of the facial nerve. These five layers are present in all areas of the face, forehead, and neck, but they vary in quality and thickness, depending on the anatomic area.(*perroti john A, 2007*).

Skin:

The Outermost Layer Of the face is the skin,the skin of the face has numerous sweat and sebaceous glands it varies in thickness and is very thin on the eyelids.The muscles underlying the skin of the face are attached to the dermis in places.Senile facial wrinkles lie at right angles to the line of pull of the underlying muscles (horizontal wrinkles on the brow ,"crow's foot"wrinkles at lateral canthus vertical wrinkles on both lips incisions along these wrinkles heal with minimal scarring(*Last,1990*).

Human skin is a stratified structure composed of layers. The superficial most layer is the epidermis, which serves as a barrier to the outside environment.(*Arndt KA,et al, 1996*).

The epidermis is the outer layer containing four major cell types: keratinocytes, melanocytes, Langerhans cells, and Merkel cells. The stratified squamous, in turn, consists of five layers or strata: squamous corneum, s. lucidum, s. granulosum, s. spinosum, and s. basale .(*ALFRED, et al 2007*).