

Cosmetic Dermatology

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A classification of the aging face and its relationship to remedies

Abstract

Appropriate therapy requires meaningful and accurate diagnosis. Nowhere is that more the case than with the changes found in the face as it ages. A classification for these changes is presented based upon tissue location, clinical morphology, clinical location, and etiology. Appropriate procedural remedies are then presented for each type of change.

Glogau's excellent photoaging classification provides us with a perspective on intracutaneous aging.^{1,2} With an expanding armamentarium of therapeutic operatives, a wider view appears to be of use. This classification would not supplant Glogau's since his would continue to provide an analysis of the cutaneous portion of the facial aging process. However, there are numerous patient complaints regarding facial aging which are not related to photoaging. Indeed, one extreme manifestation of facial aging without photoaging is that of the occasional 40-year-old patient whose face, although displaying no wrinkles or other clear signs of photoaging, undoubtedly belongs to a 40-year old and not a 20-year-old. Clearly, something else is going on.

Such a new classification (Table 1) should hopefully serve two masters simultaneously. First, a choice of appropriate therapy would result, in most cases, simply from categorizing the patient's problem(s). Second, communication with patients would be clear and succinct. Indeed, in a few minutes

most patients should be able to understand their cosmetic problem and the therapy dictated by it. The patient would be easily directed to the best solution through education and understanding of his or her cosmetic problem. The best relationship between surgeon and patient is somewhere in the realm of a team. The patient should feel that the surgeon's recommendation of service springs from necessity, therefore harboring no suspicions that the surgeon is limited by scope of expertise or motivated by pursuit of a fee.

Clinical signs

Laxity requires a tightening procedure. Presently, tightening procedures generally involve pulling the sagging skin tight and removing the excess skin (rhytidectomy). Fat may be removed as part of the process (as in liposuction or blephoroplasty).

Furrows, if they are greater than minimal depth, generally do not respond well to resurfacing procedures. Face-lifts may present a partial solution; however, isolated fur-

Table 1. Changes in facial contours occurring with age

Type of change	Tissue Location	Clinical Morphology	Clinical Location	Etiology
A	Muscular	Laxity (sag)	Cheek (may intensify nasolabial fold), neck and eyelids (bags)	Genetic (intrinsic) loss of tone; bone shift; gravity
B	Musculo-cutaneous	Furrows	Forehead lines (horizontal); frown line (vertical); smile lines, upper lip (deep)	Repeated facial expression
C	Cutaneous	Wrinkles	Cheeks, crow's feet, perioral, forehead lines (superficial)	Photoaging, intrinsic aging of skin
D		Combination		

Table 2. Appropriate treatments

Type of change	Optimal treatment
A	Rhytidectomy (with or without implants); Blepharoplasty
B	Filler Substances: Injectables/Implants — Alloderm, Artecoll, Autologen, BOTOX, Dermalogen, Fat, Gore-Tex, Isolagen, Soft-Form, Zyderm/Zyplast Collagen
C	Resurfacing: Laser, Chemical Peel
D	Combined Approach

rows do not warrant such a large procedure if injectables or implants can suffice.^{3,4} Indeed, injectables and implants frequently yield a superior result for furrows.

True wrinkling, intracutaneous lines of fine to moderate depth, is primarily the result of sun exposure, though intrinsic changes inevitably appear.^{1,2,5-8} True wrinkling is minimally affected by a cutting and pulling procedure such as a face-lift. Instead, the skin must be resurfaced and collagen restructured.

It should be noted the risk of artificiality is omnipresent in the above solutions. Resurfacing procedures can produce permanent color loss, e.g., porcelain-white China doll appearance from phenol peels. Rhytidectomies frequently present a stretched look with or without the "look of perpetual wonder" as a consequence of a brow lift. Implants can yield irregularity of areas such as the lips.

It is important for dermatologists to have a clear and concise

lexicon that allows them to communicate with each other and with patients, ultimately leading to consistently proper choices of cosmetic therapy.

Discussion

Type A facial aging is seen in Figure 1. Sagging skin is a characteristic of this type of aging. Resurfacing or filler procedures do not even begin to correct this problem; only a surgical solution yields satisfactory results.⁴ Recurrence periods vary from a few years to several years. Indeed, in some cases, the benefits last for decades which suggests underlying changes may have stabilized after a period of evolution.

Type B facial aging (Figure 2) has deep furrows, which may be present in one or more of the following areas: transverse forehead lines, vertical frown line(s), deep crow's feet, and smile lines (nasolabial folds). To qualify as a furrow in these locations, the

defect must be deep with elevations of muscle bordering the depression.^{9,10} These defects are best treated with a filler substance; they respond minimally to resurfacing and moderately to rhytidectomy (a procedure incurring greater cost and risk). Furthermore, all of these locations may often manifest only as rhytides which would then be best treated by a resurfacing procedure.

Type C facial aging (Figure 3) presents with intracutaneous rhytides. Due to a minute margin of error in treating this type of aging, implants would incur the risk of the implant being visible while an injectable may demonstrate difficulty with proper correction.

Clearly, combinations of the above three types exist in many faces (Figure 4). These cases require a combined approach. When patients choose to proceed with less than a total approach, a review of their defects should be classified to prepare them for the results of the procedure.



Figure 1. *Aging Type A*

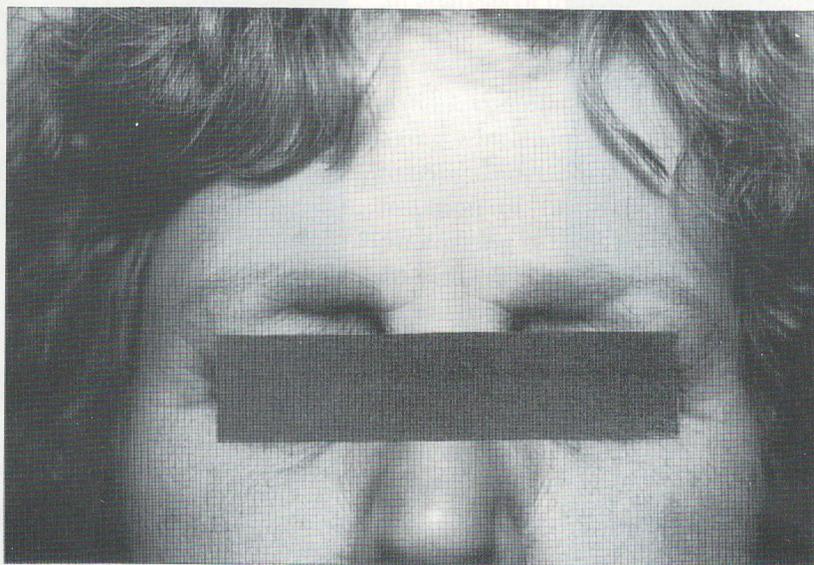


Figure 2. *Aging Type B*

There are various factors which yield optimal results in treatment of the aging face, e.g., surgical skill, healing capacity of the patient, and care the patient takes after the procedure(s). However, as important as these are, the appropriateness of the procedure for the problem that exists is just as important.

Appropriateness is linked to both rectification and to artificiality. Indeed, the treatments noted in Table 2 for Aging Types B and C often produce a relatively natural result. That is the norm for these procedures. On the contrary, one could argue that the norm for face-lifts (certainly there are exceptions) is a varying degree of artificiality. After the procedure, even the perfect candidate for a face-lift does not look as he or she did 30 years before. This is primarily because the face cannot exist as it once did due to bone and adipose shift (resorption).^{11,12} Rhytidectomy must be viewed by the patient as more of a cosmetic procedure rather than rejuvenation or restoration.

When a procedure is applied to a problem outside of the procedure's sphere of influence, dissatisfaction will almost inevitably result. For example, filling substances used for true rhytides (Aging Type C) frequently produce minimal benefit. The proper correlation is a prerequisite for success because it is ground work for discussions with patients to demonstrate why a particular approach is being recommended.

Finally, it should be noted that this classification is a clinical/therapeutic one. Cross contributions in etiology are not of major concern in this context (for example, photoaging partially sets the stage for the effects of repeated facial expressions).



Figure 3. Aging Type C



Figure 4. Aging Types A, B, and C combined

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