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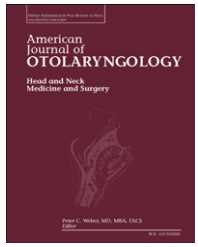

Mini-invasive boomerang-plasty for esthetic restoration of lower third face aging

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ABSTRACT

Introduction: There is an increased demand to improve facial appearance and preserve a youthful appearance for as long as possible. Minimally invasive facial procedures have boomed among young patients with less evidence of scars, low risk, and rapid recovery being some of the attractions. Some patients are even only interested in the treatment of specific units of the face. We present an alternative technique to treat jowls through truly limited incisions.

Material and methods: The surgical protocol included a complete medical history, analysis of the degree of prominence of jowls, and development of a surgical plan. We obtained pre- and postoperative medium and long-term photographs and evaluated the results. The procedure is complemented with neck liposuction and platysmoplasty.

Results: In general, edema and ecchymosis disappeared within 2 weeks. The recovery period was 2 to 3 weeks. The pre- and retroauricular scars over time were nearly imperceptible. Permanence of the results has been demonstrated in a follow-up period of 4 years.

Conclusions: Our philosophical concept lies in the preventive benefit because it is mostly performed in relatively young patients. Boomerang-plasty anatomically restores the mandibular contour from the angle to the chin by eliminating jowls and establishes an esthetically harmonious visual difference between the face and neck. It is a simple procedure with highly satisfactory and stable effects.

1. Introduction

There is an increasing demand for improving physical appearance. We live in a global world where the media, society, the workplace environment, and maybe fashion have some influence in this regard. The process of facial aging is multifactorial and progressive [1,2]. Age undoubtedly has the most important role in soft and skeletal tissue atrophy; however, food, exercise, and certain genetic characteristics also participate.

The various reasons and demands for maintaining a youthful appearance are the variables for which younger patients request surgeries, especially so-called minimally invasive procedures. Minimal evidence of scars, low risk, and rapid recovery make these procedures attractive.

Another aspect that undoubtedly drives this group of patients is the restoration of soft tissue preserving the naturalness of facial features, thus avoiding the uncomfortable antiesthetic variable of altering the original facial features, precisely in relatively young patients. In fact, some

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patients desire modifications of specific facial esthetic units. In this aspect, we are seeing more young patients who dislike the premature appearance of jowls because they represent a sign of aging, which may not correspond to the chronological age of the individual. This appearance causes a lack of esthetic definition between the face and the neck [3], a look that can displease the individual and which may be a reason for seeking specific treatment. In particular, we think that the presence of jowls gives the feeling of a loss of the frame of the face due to an alteration of the perspective of the mandibular contour from the angle to the chin.

For this purpose we propose an alternative technique to specifically correct the jowls through a truly minimally invasive procedure called "mini-invasive boomerang-plasty for esthetic restoration of the lower third of the face due to aging" (*mini-boomerang-plasty to lower face lift*), which involves two limited pre- and retroauricular incisions.

2. Materials and methods

In this clinical study we included 42 patients, 37 women and 5 men with an age range of 37 to 55 years and a mean of 45 years. In all cases, the degree of facial rhytidosis, particularly sagging and prominence of jowls was analyzed to establish that the defect may be potentially correctable with this technique of minimal invasion. The majority of the mini-boomerang-plasty to lower facelift procedures were performed under local anesthesia with intravenous sedation and on an outpatient basis. We included pre- and postoperative photographs to aid in the evaluation of medium- and long-term follow-up results. Smoking was not allowed 2 weeks before and after the procedure.

Informed consent was obtained from all patients after providing complete information on the aim of the study. The study was approved by the ethics committee of "Dr. José E. González" University Hospital.

2.1. *Surgical technique*

Local anesthesia consisted of 1% lidocaine with epinephrine (1:100,000).

2.2. *Pre- and retroauricular limited incision*

We usually mark the approach with the patient in a vertical position before he/she enters the operating room. The line drawings for the incision begin at the tragus and follow exactly the convex anatomy of the preauricular fold. Then it shifts to the retroauricular fold until half the distance of the length of the ear. It is also important to delineate the pre- and retroauricular area of the subcutaneous dissection that includes a radius of approximately 4 to 6 cm (Fig. 1). A simple way to perform subcutaneous dissection and decrease bleeding is using a flat-tipped 2-mm cannula attached to a 10-mL syringe. Even if it is not necessary it can be used to perform a mini-liposuction in selected patients who have an excess of subcutaneous fat in the preauricular area to reshape (recontouring) and slightly reduce the width of the lower face (Fig. 2).

2.3. *Boomerang design*

After exposure of the superficial musculoaponeurotic system (SMAS), we design a geometric figure that is shaped like a boomerang. This figure is composed of two obtuse triangles whose bases converge following the oblique anatomy of the mandibular border. We try to get an angularity of 45 degrees approximately. We define five key points on the boomerang design (Fig. 3): A, is the proximal point of the oblique line where both triangles converge; B, is the distal point of A; C, is the obtuse angle of the upper triangle; D, is the obtuse angle of the lower triangle; and E, is the intermediate distance between points A and B and it is used to determine the height and direction of both triangles. We previously evaluate the degree of prominence and flaccidity of the jowls, and this is corroborated during the procedure. In this sense, the distance between points A and B could be 2 to 4 cm, and the distance from points E to C and D could be 3 to 5 cm, approximately. Obviously the size of the boomerang design must be adapted to each patient according to their particular anatomical characteristics.

2.4. *Boomerang-plasty and SMAS plication*

Boomerang-plasty begins with SMAS plication. The first step consists of placing an invaginating PDS 3-0 suture to attach

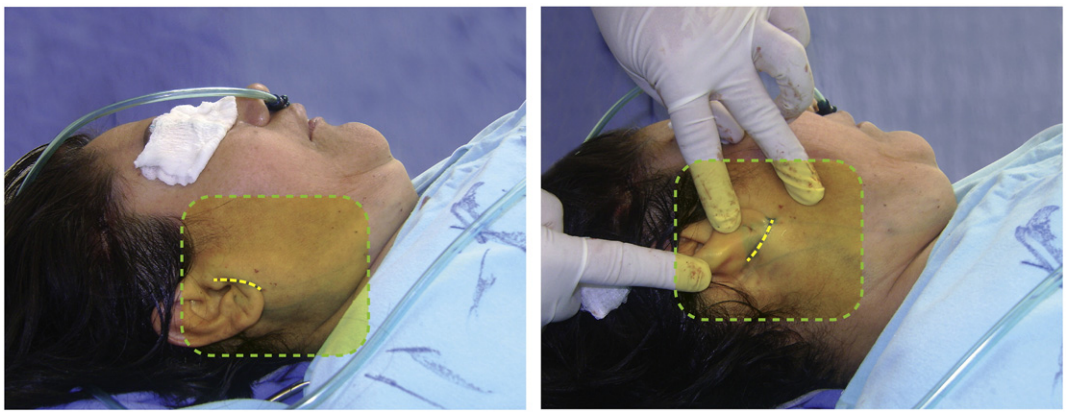

Fig. 1 – Pre- and retroauricular incisions. Limits of the pre- and retroauricular approach. Extension of the dissection area, dotted circle.