

Ring technique for the correction of unaesthetic periauricular scars

Técnica do anel para correção de cicatrizes inestéticas periauriculares

ABSTRACT

Unattractive periauricular widened or hypertrophic scars can result from the tension on rhytidoplasty incision sutures. During a 5-year retrospective study, 10 female patients with such scars were treated with the periauricular ring technique. Polytetrafluoroethylene and double 2-0 mono nylon threads were used in 6 and 4 cases, respectively, introduced with a fascia lata non-bevelled needle. Following the scar exeresis, the borders were approximated and the ring tied and attached to the temporal muscle fascia. The outcomes were satisfactory. In 2 cases the threads were removed without altering the scars' final aesthetic result.

Keywords: cicatrix; cicatrix; hipertrophic; rhytidoplasty; ear.

RESUMO

As cicatrizes inestéticas alargadas ou hipertróficas periauriculares podem ser decorrentes da tensão sobre a sutura das incisões da ritidoplastia. Em estudo retrospectivo de cinco anos, 10 pacientes do sexo feminino portadoras de cicatrizes inestéticas foram tratadas com a técnica do anel periauricular. Utilizou-se o fio de politetrafluoretileno em seis casos e o de mononylon 2-0 duplo em quatro casos, introduzidos com agulha de fásia lata sem bisel. Após a exeresis da cicatriz, as bordas foram aproximadas, e o anel amarrado e fixado na fásia do músculo temporal. O resultado foi satisfatório. Em dois casos os fios foram removidos sem alteração do resultado estético final das cicatrizes.

Palavras-chave: cicatriz; cicatriz hipertrófica, ritidoplastia, orelha.

INTRODUCTION

Dermatologists and plastic surgeons are frequently asked to correct or improve the appearance of scars resulting from previous surgeries, especially those that become hypertrophic or enlarged. Unattractive scars in the periauricular area can appear after rhytidoplasties, and are frequently associated with earlobe deformation¹. Several techniques for correcting such defects have been described in the literature²⁻⁴. If there is not enough internal support to bear the weight of the superficial musculoaponeurotic system (SMAS) against the force of gravity, the simple exeresis of inesthetical scars often results in recurrences. A technique to anchor tissues in the auricular cartilage, in order to restrain the traction forces in the incision lines and avoid a widening of scars after rhytidoplasties, was described in 1999². Stocchero later described a minimally invasive facelifting technique,^{5,6} and proposed anchoring in the aponeurosis and the temporal muscle with 2-0 mono nylon thread. Inserted by a curved bevelled needle, the thread encircles the auricular pavilion. In the present study the dermosustentation technique was used with a fascia lata needle, without bevel,^{7,8} to correct inesthetical periauricular scars and earlobe deformations.

New techniques

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Received on: 10/08/2010

Approved on: 10/02/2011

This study was performed at the Dermatology Department of the Faculdade de Medicina da Universidade de Santo Amaro (Unisa) – São Paulo (SP), Brazil.

Conflicts of interest: none
Financial support: none

CASE REPORTS

Corrective surgeries were performed in 10 female patients at the Cosmetic Dermatology Outpatient Clinic at the Universidade de Santo Amaro (Unisa), São Paulo, Brazil. The following deformities were treated: atrophic widened periauricular scars (2), hypertrophic (1) and mixed (atrophic and hypertrophic) (3), and earlobe deformities (4). The patients' average age was 53.6. The average time elapsed after rhytidoplasty for the deformities to develop was 3.9 years. Patients were followed up weekly during the first three months, and monthly for one additional year.

TECHNIQUE DESCRIPTION

The patients were instructed to wash their hair/scalp on the day of surgery with a large amount of shampoo, and dry it afterwards. The path of the incision and thread was first marked with the patient standing up, and then asepsis was carried out with iodated alcohol, with the patient seated (Figure 1). Infiltrative anesthesia (10 ml 2% lidocaine, 100 ml NaCl, 0.3 ml adrenaline 1:1000, and 3 ml 8.4% sodium bicarbonate) was used. PTFE threads (Goretex® CV-0, Gore, Flagstaff, Arizona, USA) were used in six cases, while 2-0 mono nylon dual threads were used in the remaining 4 cases. The threads were passed through the subcutaneous layer at the SMAS level, using a fascia lata needle without bevel (Figure 2), encircling the auricular pavilion approximately 3 cm from the line marked for incision. The insertion point was a 1 cm vertical incision located 3 cm above the auricular pavilion's superior implantation. The thread's first exit was at the angle of the mandible, followed by reintroduction into the same orifice. The second exit was behind the ear, and was also followed by the reintroduction of the needle and its advance up until the closure of the circle in the access point (Figure 3). The scar's exeresis was subsequently performed before the ring was closed. When redundant, the SMAS was detached and fastened. Next, the borders were approximated



Figure 2: Fascia lata needle without bevel

with continuous suture and 5-0 mono nylon thread. The ring was tied and anchored in the temporal muscle's fascia. It was not necessary to remove hair for the incisions.

RESULTS

Improvement in the ear's morphology and an absence of widening were verified in the healing process in all cases (Figure 4). In the patient with hypertrophic scars, four weekly preventive intralesional injections with 2 mg methylprednisolone were carried out on each side, from the third week after the correction, without a recurrence of the hypertrophy. Regarding complications, four patients described post-surgical pain in the site of anchorage in the temporal area, lasting an average of 45 days. The removal of the threads was indicated in two cases in that group: mono nylon due to persistent unilateral pain for four months, and PTFE due to the formation of a foreign body granuloma three months after surgery. In those cases, the scars' aesthetic result was satisfactory.

DISCUSSION

The widening and hypertrophy of scars resulting from facelifts are caused by the tension exerted on the suture lines. In order to correct this defect, it is necessary for the SMAS and the platysma be sustained prior to the exeresis of the scar. In this study, 2-0 mono nylon thread had a lower resistance to traction than PTFE thread. Since the removal of excess skin was performed during the original surgeries, it was only necessary in this study to remove the scars. The difficulty of anchoring the



Figure 1: Marking the scar to be excised and the thread's path

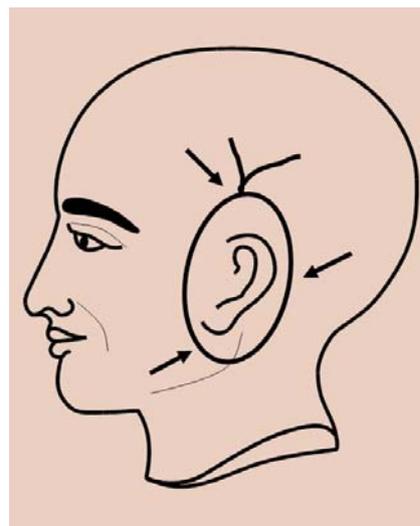


Figure 3: PTFE or 2-0 mono nylon thread position. The arrows indicate incisions for the exit and entry of the thread

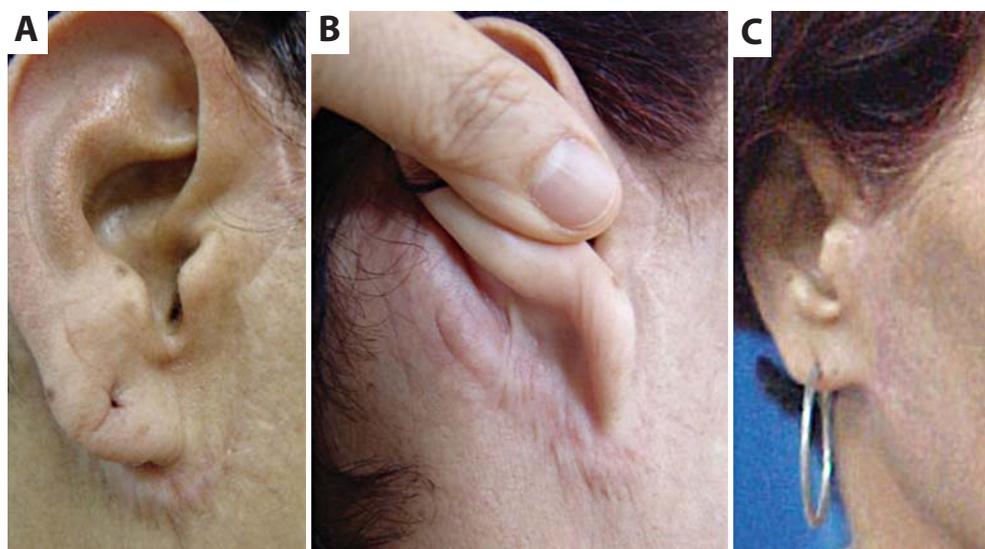


Figure 4: A. Before surgery B. Retroauricular scar detail C. After surgery

facial tissue block in the auricular cartilage inspired the use of the SMAS sustentation technique: the thread was passed around the ear and anchored in the temporal muscle's fascia. The use of the fascia lata needle without bevel avoids causing lesion to important structures. Conversely, curved needles without bevel were not used due to the difficulty of progression in the tissue, since the manual force vector considerably decreases in the curved blunt needle's extremity. In the dermosustentation technique, the fascia lata needle's slight arch allows the force to be completely transmitted to its tip, nevertheless it is not possible to turn fully 180° around the ear. As a result, it was necessary to use three exit points, with the reintroduction of the needle into the same orifice of the previous exit. After the closure of the ring's knot, excess periauricular skin can occur. In that case, it must be excised in order to avoid bulging. If necessary, the PTFE or mono nylon threads can be removed after three months, without compromising the aesthetic results.

CONCLUSION

The periauricular ring technique helps in the correction of morphologic deformities of the earlobe caused by facelifts, preventing unattractive scars. ●

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