

# One-step technique for esthetic earlobe repair

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## Summary

Earlobe tear is a common cause for earlobe disfigurement. Different techniques described in the literature for earlobe repair usually require re-piercing of the ear after some time at a different site avoiding the scar tissue. If re-piercing is performed at the original site because of cosmetic reasons, there is risk of tract elongation. We describe a new technique in which polypropylene deep buried suture is left *in situ* to strengthen the repaired scar tissue with preservation of perforation at the upper end of the slit, thereby giving good cosmetic result to the patient in single sitting.

**Keywords:** earlobe repair, aesthetic surgery, split earlobe, dermatologic surgery, ear rings, aesthetic surgery

## Introduction

Torn earlobe is also referred to as cleft or split earlobe. Problem of slit elongation or cleft formation occurs due to the tension created by heavy jewelry at the pierced site. The repair of tear or elongated slit is a common cosmetic surgery procedure. Multiple techniques are described for the repair of elongated or completely torn earlobe tracts, but they have their own pros and cons.<sup>1–9</sup>

The commonest limitation with previously reported methods is the requirement of second sitting for re-piercing. If it is done at the original site, there are chances of tract elongation. Greco *et al.*<sup>7</sup> have reported a very good technique to strengthen the scarred tissue by placing a deep polypropylene suture which is left *in situ*. However, in this method, patient was subjected to repeat piercing of the earlobe after 3 months, at the site just above the buttress suture. Although the measurements and procedure are well explained by Greco *et al.*,<sup>7</sup> still if by mistake the ear is re-pierced at the site of suture or below it, the chances of tract elongation remain. We describe a modification of this technique in which the repair of the elongated slit and preservation of perforation at the original site are done in single sitting.

## Case report

A 46-year-old woman presented with complaints of bilateral earlobe slit elongation since 2 years. She gave history of wearing artificial, heavy earrings, which led to slit elongation. There was no history of contact dermatitis to artificial earrings. On examination, patient's earlobe slits were clean, centrally placed and elongated on both sides. As the earlobe slits were at good cosmetic orientation, we preferred leaving a small part of the slit intact at the upper end, rather than closing it completely (Fig. 1).

## Technique

The patient was started on antibiotic, analgesics and anti-inflammatory drugs on the day of surgery before procedure. Following standard aseptic preparation of local area, skin was infiltrated with local anesthetic mixture (1% lignocaine along with adrenaline in 1:10 000 dilution) in deep dermis circumferentially all around the slit. The margins of slit were excised with 11G surgical blade on either side except the 2 mm margin at the upper end of the slit (Fig. 2). The excised skin was removed and pressure applied to maintain hemostasis. After control of the bleeding, one suture of fine, nonabsorbable, 6-0 polypropylene was placed perpendicular to the long axis of slit in the deep dermis of the edges as buried suture, just at the upper end of the freshened margins and left *in situ*. Another similar

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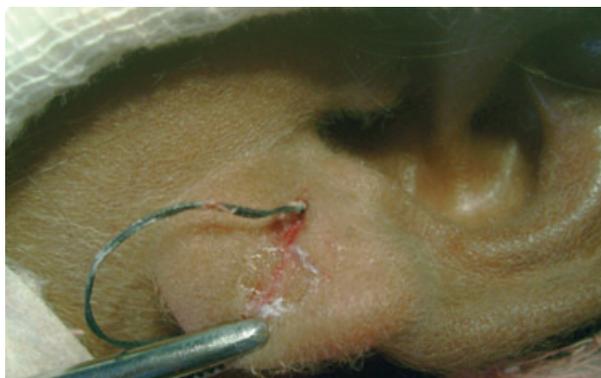
**Figure 1** Elongated cleft earlobe.



**Figure 3** Two polypropylene deep, buried sutures at the upper end of freshened margins.



**Figure 2** Freshened margins except 2 mm at the cleft apex.



**Figure 4** Superficial skin closure using tissue glue and silk thread passed through intact perforation at upper end.

buried suture was placed just below the first suture (Fig. 3). The freshened edges of the slit were tightly approximated by these sutures. A sterile silk thread was passed and tied through the perforation left at the upper end to prevent its closure. This was followed by the superficial closure of the skin using tissue glue (2-octylcyanoacrylate) on both sides of the slit (Fig. 4). Patient was advised to come for follow-up after 1 week and then 8 weeks. She was asked to delay wearing of earring for at least 2 months.

## Result

After 8 weeks, her earlobe slit edges had approximated, with a small perforation at upper end of the repaired

slit (Fig. 5). The buried polypropylene sutures were neither visible nor palpable. The silk thread was cut and removed. Patient was asked to wear a small wire of gold as earring. She is still on regular follow-up.

## Discussion

Since time immemorial ear-piercing has been a well-recognized practice especially among women because of cultural or fashion-related reasons. The common complications of earlobe piercing are contact dermatitis to metals in artificial earrings, keloid formation, infection, lobular tissue loss from trauma and tearing of the earlobe.<sup>10</sup> Torn earlobes most commonly result from repeated mechanical stress and gravitational pull of heavy earrings or by downward trauma resulting from the earrings been caught on objects. As the pressure point from the earring atrophies, the piercing hole



**Figure 5** Healed elongated tract at 8 weeks with perforation preserved at original site.

gradually enlarges and eventually splits.<sup>6,10</sup> Earlobe tears can be partial or complete. Partial tear can either be an enlarged ostium or an elongated slit.<sup>6,10</sup>

The multiple surgical techniques described aim for complete and esthetically acceptable closure of the torn earlobes.<sup>1–9</sup> But the risk of earlobe tract elongation remains on re-piercing the earlobe at the original site. Though, the exact incidence of tract elongation is not studied, but theoretical risk is high because an undamaged skin has higher tensile strength than damaged scar tissue. The risk of tract elongation increases if re-piercing is carried out early than recommended time period of 3 months.<sup>7,9</sup>

The purpose of adding the deep polypropylene, non-absorbable suture in dermis during earlobe repair is to close the dead space by approximation of the slit edges and to provide permanent reinforcement to repaired earlobe slits which absorbable sutures would not do. The polypropylene suture used has inherent inert properties, is nonthrombogenic and does not subject to enzymatic degradation.<sup>11</sup> Very fine caliber of the suture is taken for closure of earlobe edges to prevent any local induration after healing of repair. Though, there is theoretical risk of foreign body granuloma formation around the polypropylene suture also, it is negligible because it is an inert material.

In this patient, we have done side to side closure of the edges with modification. Patients who have large cleft and little ear lobe tissue between the cleft lower apex and inferior rim of earlobe usually develop complication of notching in case we do simple side to side closure. Our patient had sufficient earlobe tissue between the cleft lower apex and the inferior rim, so

we did side to side closure of the edges without formation of any inferior rim notching. Our technique is different from the previously described technique in two ways. First, the perforation left at upper end avoids the second sitting for re-piercing. Second, the two buried sutures of polypropylene provide permanent reinforcement to the repaired scar tissue and bear weight of heavy earrings afterwards.

Our technique has few limitations. First, it is not suitable for the patients in whom the original site of perforation is not cosmetically positioned. Second, this technique needs more expertise as a small  $1 \times 1$  mm hole is left at upper end and suture placement has to be very accurate to prevent its palpability later. Third, the procedure is to be avoided in patients with keloidal tendencies. Last, it will be difficult to place horizontal sutures in patients with thin earlobes.

In conclusion, our technique is a promising one-step procedure for providing cosmetically desirable earlobe repair in selected group of patients.

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