SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

Surgery

Earlobe Piercing: Not Always as Expected

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DOI: 10.36347/sasjs.2024.v10i06.012 | **Received:** 19.04.2024 | **Accepted:** 23.05.2024 | **Published:** 20.06.2024

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Abstract **Review Article**

Piercing the earlobe is a widely practiced custom in our context. While its purpose is to adorn, it is not without risks and can sometimes lead to complications that contradict the intended goal. The two most dreaded complications are auricular lobe cleft and keloid scarring. Their treatment is challenging, making prevention crucial.

Keywords: earlobe, piercing, split earlobes, Keloid scar.

I. INTRODUCTION

Since time immemorial, humans have used a variety of accessories to adorn themselves or assert their belonging to an ethnic group, including piercing, especially those of earlobes. In our current society, this practice is widespread, and almost all women get their earlobes pierced at a young age. However, this piercing is not without risks and can sometimes lead to complications such as local infections, allergic skin reactions, the formation of granulomas and cysts, keloid scars, and even split earlobes. Although most of these complications can be relatively easily managed with local or sometimes general treatment, the latter two, in particular, pose serious aesthetic problems that often require plastic surgery intervention for their management.

II. Split Earlobes:

a. *Definition:*

Split earlobs, torn earlobes, also known as cleft earlobes, can be categorized as congenital and acquired [1], and the latter are either complete or partial [2].

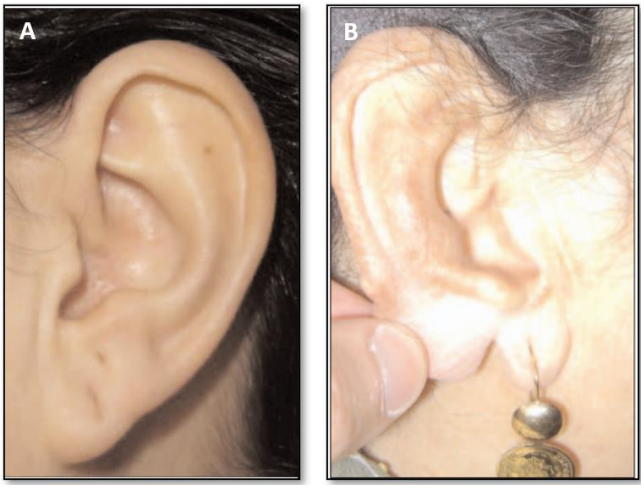

Figure 1: Cleft of the earlobe. (A : partial / B : complete) [3]

A complete cleft typically happens when an earring is forcefully pulled out of the original pierced hole, resulting in a division into medial and lateral limbs, sometimes the division can leave up to three limbs (fig 2). On the other hand, a partial cleft occurs when the piercing canal is elongated or deformed but hasn't completely separated through the earlobe [4].

Figure 2 : Double cleft of the earlobe dividing it into three lobes.[3]

The cause of the condition can be a trauma, wearing heavy earrings, or even a metal allergy.(5) The incidence of the condition is about 1-2% [6].

b. *Therapeutic Means:*

The significant aesthetic disfigurement incurred increasingly prompts patients to seek consultation with a plastic surgeon. The proposed repair methods are diverse and tailored to each case. Reconstruction most commonly involves surgery, which offers multiple techniques.

The simplest approach entails freshening of the edges of the cleft and reconstructing in two stages: first, a posterior realignment using a "Z-plasty" to prevent scar retraction, followed by an anterior alignment through direct suturing, adjusting the length of the edges as needed to ensure perfect congruence [3,7].

The original piercing point can be preserved in the upper part of the cleft by using a full-thickness triangular flap, taken from the posterior margin [8].

Another surgical technique involves using a conchal cartilage graft inserted into the earlobe to prevent recurrence (fig 4) [3,9].

In cases of partial clefts, an "elliptical punch biopsy" may be recommended. This technique transforms the widened opening into a de-epithelialized ellipse before suturing the two sides of the cleft [10].

Dermabrasion, ultrasound therapy, and pulsed carbon dioxide laser are also other techniques utilized by some authors [3,11,12].

c. *Prevention:*

The occurrence of earlobe clefts poses a threat to anyone wearing earrings, emphasizing the importance of prevention, which involves adhering to several guidelines [3] :

- Avoiding wearing heavy earrings for prolonged periods.
- Keeping earrings away from the ear when using the telephone.
- Removing earrings before undressing and styling hair.
- Being aware that young children and babies are often drawn to earrings.
- Prohibiting children from wearing dangling earrings.

III. Keloid Scar of the Earlobe:

a. *Definition:*

The keloid scar results from a pathological healing process in a hypertrophic manner, characterized by excessive production of various components of the connective tissue, particularly collagen. It differs from hypertrophic scarring in its extension beyond the boundaries of the initial injury, a lack of spontaneous healing even after more than two years, and a pronounced tendency to recur after surgical excision on healthy skin [3,13].

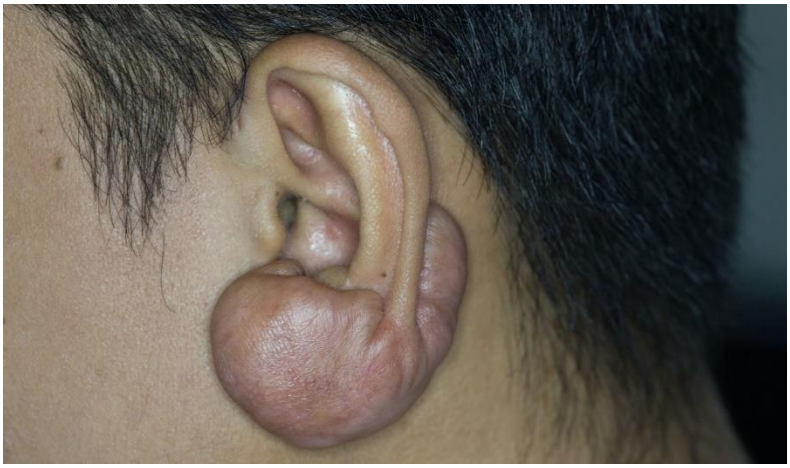

Figure 3 : Earlobe keloid

b. *Epidemiology & risk factors:*

Keloid scarring has been observed across all racial groups, but it is more frequent in individuals with darker skin pigmentation, with incidences ranging from 6% to 16% in African populations. The likelihood of keloid formation is approximately 15 times higher in individuals with darker skin. Moreover, keloids are more commonly seen during periods of hormonal changes such as puberty and pregnancy [14].

The development of keloid scars is influenced by genetic factors, with evidence suggesting an autosomal dominant inheritance pattern. There are two rare syndromes associated with familial keloids: Rubinstein-Taybi syndrome, characterized by broad toes and thumbs, distinctive facial features, intellectual disability, and an increased likelihood of keloid formation; and Goeminne Syndrome, which presents with keloids, torticollis, renal dysplasia, and cryptorchidism [14].

In addition to pigmented skin, the keloid scars occurs particularly in young people aged 10-30 years, with a higher incidence in females, which poses significant distress for young girls. Keloid scars tend to localize preferentially in specific regions referred to as "cursed" areas, including the presternal, scapular, pubic, neck, and earlobe regions, with the earlobe being particularly susceptible.

This phenomenon can be attributed to the increased skin tension in these areas, with the ears being prone to keloid formation following earlobe piercing due to the substantial skin stretching caused by wearing earrings. Additionally, the use of sterile equipment also contributes to the development of keloids in these regions [3,13,15,16].

c. *Clinical manifestation:*

This scar presents as a red to black, bulging lesion with a typically broad pedicle. It gradually becomes firm and tense and exhibits, in its typical form, extensions resembling "crab claws" perpendicular to the scar. After an initial inflammatory phase of varying duration, it loses its inflammatory characteristics and only a hardened, painless bulging mass remains, which never regresses spontaneously and evolves towards an increase in volume.

d. *Therapeutic Means:*

The treatment of keloids is not straightforward. There are several therapeutic methods, none of which have unanimous agreement:

- Radiotherapy (cobalt or brachytherapy) practiced by some authors is considered a preferred method for small keloids [13].
- Combining radiotherapy with intralesional excision surgery yields the best results [3,13,15].
- Cryotherapy using either dry ice or liquid nitrogen requires numerous sessions, and its painful nature often limits prolonged use [3,13,17].
- Intralesional corticosteroid injections are more effective in younger keloids [3,13].
- Intralesional excision followed by immediate corticosteroid injection post-healing has shown satisfactory results with a low recurrence rate [17].
- Post-operative application of continuous pressure using a custom-made elastic fabric device (ear clips) is considered an important factor in preventing recurrence [13].

e. *Prevention:*

The multitude of treatment options available reflects the difficulty in definitively treating keloids, with intralesional excision surgery being inevitable in advanced cases, albeit sometimes debilitating. This underscores the importance of prevention, which involves [3]:

- Avoiding earlobe piercing in patients at risk.
- Avoiding the use of heavy earrings that stretch the skin.
- Using sterile equipment for earlobe piercing.

IV. CONCLUSION

In our context, earlobe piercing, widely prevalent, is sometimes associated with numerous complications that contradict its intended purpose of "adornment." While surgery often provides a solution to correct split earlobes, treating keloids remains challenging and requires a combined approach involving various medical, surgical, and radiotherapeutic procedures. Therefore, it is crucial to emphasize prevention by providing information and raising awareness among the general public about the associated risks, as well as informing healthcare personnel about the options offered by plastic surgery to address these lesions.

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