ORIGINAL ARTICLE

CLINICAL AND DEMOGRAPHIC PROFILE OF CASES REQUIRING EAR LOBE REPAIR IN NORTH GUJARAT

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ABSTRACT

Introduction: Wearing various types of earrings is not only an age old custom but a fashion symbol also. This demographic and clinical profile study was done on ear lobe cleft cases attending ENT OPD of a tertiary care center of North Gujarat.

Methodology: The size, number of ears involved, factors leading to ear lobe cleft such as weight of earring, duration of wearing heavy rings, pull leading to tear were noted in all cases. Surgical repair was done by scar excision and suturing. The procedure was completed in 15-20 minutes and minimal post surgical complications in the form of depressed linear scar and lower border notching are seen in 2 cases.

Results: Prevalence of ear lobe cleft was 2.4% of all OPD cases. 192 cases (328 ears) included 187 (97.3%) females and 5 males. Both ears were involved in 136 (70.8%) cases while 56 cases had unilateral involvement. A partial cleft of 6 to 10 mm size (range from 3-25 mm) was most common reason in females to visit for repair and total cleft was observed in 122 (37.1%) ears. 42% females (age 15-45 years) had bilateral clefts whereas unilateral involvement was common at young age (1-15 years). Factors leading to cleft formation were earrings weight and prolonged use (44.4% tears were due to weight 15 grams or more).

Conclusion: Ear lobe cleft can be repaired by simple surgical approximation. Prevention of recurrence can be done by simple advice of avoiding the scar site for re-piercing and use of light weight earrings.

Keywords: Ear lobe clefts, ear lobe repair, surgery for ear lobe clefts

INTRODUCTION

Ear piercing in India is not only a social custom, especially common in rural Indian women, but also a symbol of fashion among urban and rural women. This practice has increased recently among young age group, who distinguish themselves and experiment a lot for newer experiences. It is not uncommon to see women and sometimes men adoring themselves with array of ear rings of different shapes and sizes. Ear piercing ranges from single piercing to multiple piercing, unilateral to bilateral and ear rings also come in all shapes and sizes with different materials and weights. Common ear rings are metallic or plastic material molded into different shapes depending upon social customs and aesthetic sense. Though this practice is less common in Indian men, it is seen commonly in certain tribes. The weight and constant use put an extra burden on the soft lobule which gives way down to get stretched, thus increasing hole size and diameter. Sometimes acute tear occurs but is neglected that results in cicatrization or epithelialization with formation of a cleft of larger size. Thus, it is a common acquired cause of ear lobe defect requiring surgical reconstruction. Since earrings are used in both ears many a women have to undergo single or multiple ear lobe repairs because of clefts formed in the ear lobe due to prolonged use of these ornaments.

The present study in an analysis of the clinical profile of 192 consecutive cases who came for ear lobe repair from January 2012 to September 2012 in a tertiary care hospital in North Gujarat.

MATERIALS AND METHODS

It is a retrospective analytic study of 192 cases (328 ears) in different age groups. Ear lobe repair was done for correction of ear lobe cleft in patients attending ENT OPD in a tertiary care hospital of North Gujarat from January 2012 to September 2012. The pattern & size of cleft, type of the ornament worn and duration for which earrings were worn were noted. In those cases who were eligible for surgery an informed consent was taken prior to surgery. The local part was sterilized using povidone iodine solution and spirit and draped. Ear lobe was anaesthetized using a solution of lignocaine with adrenaline using a 26 Gauze needle. The ear lobe was stretched using Adson's toothed forceps, chalazion

clamps or skin hook. A thin layer of skin was removed from the whole circumference of the cleft using a No. 11 knife. The raw margin was sutured with nylon 4-0 laterally and medially and dressing done. The patients were recalled for stitch removal on the 10th post operative day and advised for repiercing after one month. Patients were also advised to wear a lighter ornament at a different place than the scar site to prevent the recurrence of the cleft.

RESULTS

The average number of cases coming for ear lobe repair is 21 per month. This represents a prevalence of ear lobe cleft/cuts of 2.4% of all OPD cases. Of the 192 cases, 187 (97.3%) were females and 5 were males. Both ears were involved in 136 (70.8%) cases while 56 cases had unilateral involvement.

Table-1: Age & sex distribution of Cases undergone ear repair (n=192)

Age	Male		Female	
	Unilateral	Bilateral	Unilateral	Bilateral
Upto 15 years	0 (0%)	0 (0%)	14 (7.2%)	6 (3.1%)
15-45 years	1 (0.5%)	1 (0.5%)	23 (11.9%)	64 (33.3%)
45-60 years	2 (1%)	1 (0.5%)	12 (6.2%)	56 (29.1%)
More than 60 years	0 (0%)	0 (0%)	4 (2%)	8 (4.1%)
Total	3 (1.5%)	2 (1%)	53 (27.6%)	134 (69.7%)

24 out of 56 cases (42.8%) involved left ear and the remaining 32 (57.1%) were in the right ear. Overall, 328 ears were reported in the study. Partial cleft was the most common presenting sign in 180 ears (54.8%), total cleft was observed in 122 (37.1%) ears and 26 (7.92%) ears had multiple (2 or more) clefts. Of the 5 males, 2 had bilateral clefts and the remaining 3 had unilateral cleft. The common age group in females exhibiting ear lobe cleft was 15-45 years. Of 328 ears, 151 (46%) were seen in this age group in females. Bilateral involvement was more common in the age group of 45-60 years. 56 out of the 68 women (82%) had bilateral involvement in this age group. In contrast, unilateral involvement was common at young age group (1-15 years) in females (Table-1). The length of the cleft varied from 3 mm to 25mm (Mean 9.46± 7.24 mm). In 139 ears (42.3%) the cleft size was between 6mm to 10mm and in 5 cases the size was 25 mm (Table-2).

Table-2: Distribution of ears according to the length of the ear lobe cleft (n=328)

Length of the ear lobe cleft (mm)	Ears (%)
1-5	56 (17.0)
6-10	139 (42.3)
10-15	93 (28.3)
15-20	32 (9.7)
20-25	8 (2.4)
Total	328 (100)

In males, in 3 out of 5 cases, ear trauma was associated with the formation of cleft. History of trauma was given by 10 out of 53 females with unilateral involvement. The causes of tear in these women were, pulling of the ear ring by child (2 cases), waking up in the morning with the ear ring stuck in the pillow or bed sheet (4 cases) and snagging of earring with a hairbrush (4 cases). In all other cases, weight of pendulous earrings with prolonged use resulted in the cleft. The weight of earrings plays crucial role in causing cleft. 140 (44.4%) out of 315 ears were torn because the weight of the earrings was more than 15 grams, as compared to 60 (19%) ears when weight was upto10 grams (Table-3).

Table-3: Distribution of ears according to the weight of the earrings (n=315)

Weight of earring (grams)	Number of ears (%)
1-5	15 (4.7)
6-10	45 (14.2)
11-15	115 (36.5)
16-20	140 (44.4)
Total	315 (100)

In all cases the peroperative and postoperative periods were uneventful except in one female, in whom resuturing had to be done in both ears after 15 days of the primary procedure. Depressed linear scar occurred in one and lower border notching due to improper alignment occurred in another case. All patients were called for follow up after 2 months of surgery and no further complaints were noted. Immediate repiercing was not done in any case and was advised one month after surgery in all cases.

DISCUSSION

Ancient Egyptian pharaoh King Tutankhamen is of one of the earliest known to have stretched ear lobes[1]. Latin-American cultures have routinely pierced the ears of newborn baby girls, to differentiate them from males. In ancient India men and women commonly wore ear plugs. Children's ear lobes were pierced and a small clay cylinder was put in the holes. As the child grew, increasingly large cylinders were put in the lobes until they had stretched enough to accommodate plugs with diameters of up to 6 centimeters[2]. Hundreds of these

objects have been found by archaeologists and are displayed in some museums in India. With the advent of new technology earrings of myriads of sizes, weights and shapes are made available. One commonly sees ear lobule pierced at multiple sites. Umbilicus, eye brows, lips and nasal alae are the other sites. Thus an age old custom became a fashion symbol.

The ear lobule being a soft structure consisting of loose areolar tissue and fat and pieced for social, religious and aesthetic reasons. An aftermath of this is stretching and tearing of the holes of the earrings with time resulting in increased hole size of several millimeters and total cleft formation. This is the most common reason for cleft formation. Since earrings are worn in both ears, bilateral clefts occur commonly as observed in the present study. The practice of carrying child in arms and bosom tempts child to fondle with the shapely colorful earring as a small toy and thus occasionally results in tearing while child gets down still holding earring in hand. The prize of this motherly act is an acute tear which is occasionally ignored and thus it becomes a complete cleft with ragged margins. Sometimes a tuft of hair is stuck in the earring and the hole gets stretched while hair is combed, unwittingly, the hole size increases. Occasionally the earring hook is tucked into the mattress or pillow cover during sleep and as a woman gets up in the morning raising head results in tearing of the hole. In one of the males in present study, a tear occurred because the thread of the kite intermingled with the earring and tore the lobule while thread was pulled back during kite flying.

Although numerous repair methods have been described to repair complete and incomplete acquired clefts, it is the author's experience that complicated surgical repair of the cleft ear lobe flaps are difficult to handle on the fleshy and mobile tissues of the earlobe. Simple scar excision with re-approximation of skin edges is an easy and short procedure and is adequate for excellent postoperative results as is reported elsewhere also[3]. Immediate repiercing was not done in any case in this study as it increases the chances of recurrence of the cleft and infection.

The literature describes repair techniques that do not provide for repiercing as well as procedures that leave an opening for the reinsertion of an earring[4,5]. Various configurations of surgical flaps have been described in an effort to improve cosmesis, decrease scar formation, and preserve or create an earring hole. Boo-Chai[6] in 1961 described excision of the cleft and placement of a portion of a sterile toothpick to preserve an opening for an earring post repair. Pardue[7] in 1972 presented a technique using a small transpositional flap to recreate a hole for an earring at the time of the repair. Elshay[8] in 1986 described a method of leaving a 2-O suture in the repair to preserve the earring hole. In 1975, Hamilton and La Rossa[9] presented a Z-plasty technique and a 1/2 Z-plasty was described by Abenavoli[10] in 1996. Zoltie[11] described a lap joint technique with overlapping flaps in 1987, and Fearon and Cuadros[12] presented an L-plasty method of lobe repair in 1990. In a 1996 communication, Hersch[13] described a method of repair for incomplete clefts using a biopsy punch.

There are advantages and disadvantages of each of these techniques. The results of the present work reveal that simple approximation with minimal marginal skin removal preserves the shape and size of ear lobule.

CONCLUSION

Ear lobe cleft is an outcome of a social practice and can be repaired by simple surgical approximation. Prevention of recurrence can be done by simple advice of avoiding the scar site for re-piercing and use of light weight earrings.

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