WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Novel Surgical Procedure of Repair for Stahl's Ear: A Case Report

[1]Prof. Uma, [2]Babita Kumari, [3]Lovepreet, [4]Muthu Kumaran

[1]Professor, Akal College of Nursing, Eternal University
[2, 4] Assistant Professor, Akal College of Nursing, Eternal University
[3]Nursing Tutor, Akal College of Nursing, Eternal University

DOI: https://doi.org/10.55248/gengpi.2022.3.10.64

ABSTRACT

A pointed-ear defect characterized by an abnormal folding of the skin and cartilage of the pinna, which produce an "elfin ear" or "elf ear" characterized by an ear-rim with a pointed upper-edge, rather than a rounded upper-edge**.**A 10 year old boy admitted at IGMC Hospital, Shimla during the month of April' 2022 with the chief complaintsof bilateral abnormal growth of pinna by birth. After the general physical examination, routine blood profile and other Lab investigation, he diagnosed Bilateral Stahl's Ear (Type I), underwent bilateral otoplasty. Prognosis is good and patient discharged post operatively after a short stay at hospital.

Key words:Elfin ear, Elf ear, Pinna , Stahl's ear, Otoplasty

1. INTRODUCTION

A Stahl's ear deformity consists of an extra cartilage fold in the scapha portion of the ear. This results in a pointed ear shape. Stahl's ear is caused by misshapen cartilage. It is characterized by an extra horizontal fold of cartilage (crus). Normally, there are two: superior and inferior, In Stahl's ear, there are the third horizontal crus. The helix (or upper portion of the ear) may uncurl, giving the ear a pointed shape.[1,2]

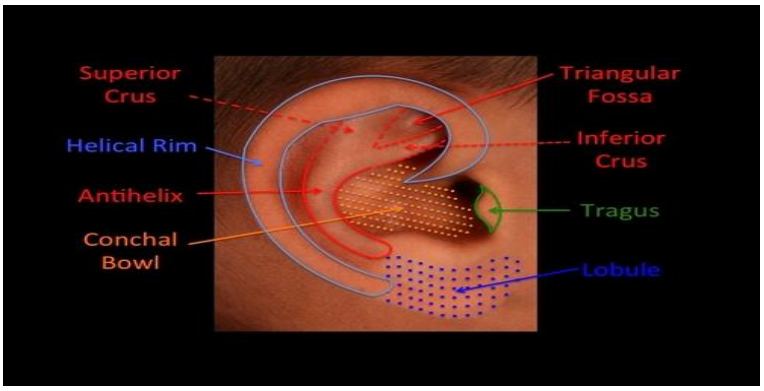

Fig-1: shows the normal antihelix split into superior and inferior crus

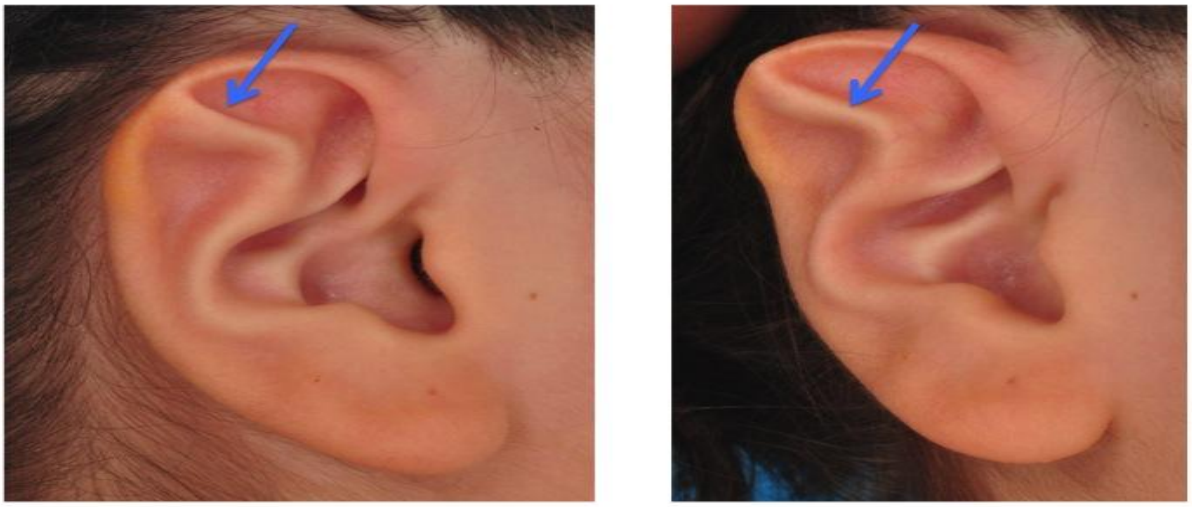

Fig-2: Third crus (extra fold in the ear) extends to the edge (helical rim) causing the ear to look pointed.

If Stahl's ear is discovered in the first few weeks to months after birth, ear molding may correct this deformity and avoid the need for surgery. Infants' ears are still soft and flexible, which makes them responsive to molding. Like many other conditions in which ear molding is useful (such as cryptotia, constricted ears and protruding ears), the earlier the intervention, the shorter the treatment. Early treatment also often leads to better outcomes.[3,4]

In older children, surgical correction is necessary to correct the deformity. Surgery to correct Stahl's ear involves reshaping, repositioning and suturing the abnormal cartilage to reverse the pointed shape of the ear. Although a general anesthetic is needed, the operation is done on an outpatient basis and child will be able to return home the same day.

2. CASE PRESENTATION

A 10 year old male child has been admitted at Indira Gandhi Memorial Hospital(IGMC), Shimla in the month of April, 2022 with the chief complaints of bilateral abnormal growth of pinna by birth. After the general physical examination, routine blood profile and other Lab investigation, he diagnosed as Bilateral Stahl's Ear (Type I) and underwent medical and surgical management.

Birth History

Patient was born by Lower Segment Caesarean Section and cried after birth, as well as achieved developmental mile stone according to the chronological age. Found that, Pinna ishaving abnormal cartilaginous growth.

Past medical history:

Patient does not have any significant past history of communicable and non communicable diseases. No history of seizure, Cyanotic spells etc. Not allergic to any drug or food.

Present history of illness:

Patient was born with abnormal fibro cartilaginous growth in the pinna. He has been brought to the department of plastic surgery for Otoplasty. There are no complaints or evidence of hearing problem in both ears.

Chief complaints:

Patient has complaints of bilateral abnormal pinna since birth.

General examination

- Weight: 28 Kg
- GCS: 15/15
- Respiratory Rate: 16 breathe/ minute
- SpO_2: 96% RA
- Afebrile

Special Investigation:

Routine blood profile, Liver Function Test, Blood Urea Nitrogen.

Treatment:

Surgical Intervention: Bilateral Otoplasty- Otoplasty is a type of cosmetic surgery involving the ears. During otoplasty, a plastic surgeon can adjust the size, positioning, or shape of your ears.

Description of Procedure: First, a helical rim incision is made to expose the abnormal third crus and upper pole of the ear. The third crus is excised as a narrow wedge of cartilage and posterior skin, and the defect is closed primarily. The free third crus cartilage is then grafted onto the scaphal cartilage in an anatomically correct position to form a superior crus. The anterior skin flap is redraped and bolstered over this graft. Only a very small scar on the helical rim remains visible anteriorly.

Pre-operative Orders:

Patient has kept on NPO from midnight 12.00 am on 31.03.2022 and surgical site preparation done. Inj. Xylocaine sensitivity tested for anaesthesia. After Written consent preoperative medications such as Inj.Piptaz 2.5 gm IV ATD.

Surgical Notes:

- ✓ Excision of auricular cartilage of size 2cm x 0.5 cm from bilateral ears extending from anti helix
- ✓ Cartilage graft placed to form superior crus
- ✓ Fixation of cartilage by Prolene 5- 0: Round Bodied
- ✓ Helical suturing with Nylon 5-0 cutting.

Post operative Orders:

Post operatively the patient condition is fair and doing well. No wound seepage. Patient has prescribed with Inj. Piperacillin+ Tazobactam 2.5 gm IV, Inj. Pantop 40mg Tds, Inj. PCM 350 mg bd, Inj. Emeset 2.5 ml tds, Inj. Dicloaqua 50 mg tds.

Care plans:

Nursing Problems such as Anxiety, Imbalanced nutrition less than body requirement, body image disturbances, Sleep pattern disturbances, related to hospitalization are identified and addressed by appropriate nursing interventions.

Outcome:

Stahl’s ear is a congenital abnormal cartilaginous growth may be treated with ear moulding. But in this case, ashe is an age old child required and undergone surgical intervention and post operatively with no significant complications. The prognosis is good and recovery is early and patient has been discharged post operatively with a short stay at hospital with no complications.

3. DISCUSSION

Malformations are the definition of congenital auricular malformations (microtia, cryptotia). This research describes deformities as having a normal chondrocutaneous component, but with an aberrant architecture classified as restricted, conspicuous, or Stahl deformity.[5]

Several procedures for reconstructing Stahl's ear surgically have been documented. These treatments range from basic surgeries, such as zetaplasty, which is the realignment of the third crus, to more sophisticated procedures, such as the temporal periosteal flap developed by Nakayama et al. for auricular support.[6,7,8]

There are cases of non-operative therapy including the use of splints to shape the auricle; however, better outcomes are observed when this treatment is administered in the newborn period. Due to the varying clinical manifestations of the illness, however, it is challenging to produce consistent outcomes utilising a conventional surgical procedure.[9]

Currently, the modified Chongchet approach is the most used method for treating this abnormality. There is a tendency toward use Mustarde sutures in modest abnormalities accompanied by cartilage-weakening procedures. Extreme situations necessitate the adoption of a prior method involving cartilage and skin excision.[10]

A Stahl’s deformity occurs when the upper ear has an extra fold of cartilage, resulting in a pointed appearance. Children and parents are often unaware of this deformity until they get closer to school age.

When Stahl’s ear deformity is diagnosed in the first days of life, it may be improved non-surgically by ear molding techniques. In order for molding to be successful, it must be implemented in the first 2 weeks of life. When molding therapy is not an option, surgical correction may be required.

Stahl’s abnormalities are often surgically treated when the child is 4-5 years-of-age. Correction often involves removal of cartilage to eliminate the pointed portion of the ear and suturing techniques to help the ear hold its new shape. Surgery is typically done as a day surgery procedure.

H M Kaplan, D A Hudson similarly reported the A novel surgical method of repair for Stahl's ear: a case report and review of current treatment modalities in 1999 reported that Stahl's ear is a congenital malformation of the auricle, which is uncommon in non-Oriental societies. A number of different treatment modalities have been suggested, many of which yield unpredictable results. We review current treatment modalities from the English literature and describe a novel, simple surgical method of repair.

4. CONCLUSION

A 10 year old boy admitted at IGMC Hospital, Shimla during the month of April' 2022 with the chief complaintsof bilateral abnormal growth of pinna by birth. After the general physical examination, routine blood profile and other Lab investigation, he diagnosed Bilateral Stahl's Ear (Type I), underwent bilateral otoplasty. Prognosis is good and patient discharged post operatively after a short stay at hospital.

REFERENCES

1. Fischl RA. The third crus of the anthelix and another minor anomaly of the external ear. PlastReconstr Surg. 1976;58(2):192-5. PMID: 940872 DOI: http://dx.doi.org/10.1097/00006534-197608000-00009
2. Ferraro GA, Perrotta A, Rossano F, D'Andrea F. Stahl syndrome in clinical practice. Aesthetic Plast Surg. 2006;30(3):348-9. DOI: http://dx.doi.org/10.1007/s00266-005-0139-4
3. Yotsuyanagi T, Nihei Y, Shinmyo Y, Sawada Y. Stahl's ear caused by an abnormal intrinsic auricular muscle. PlastReconstr Surg. 1999;103(1):171-4. PMID: 9915179 DOI: http://dx.doi.org/10.1097/00006534-199901000-00027
4. Gleizal A, Bachelet JT. Aetiology, pathogenesis, and specific management of Stahl's ear: role of the transverse muscle insertion. Br J Oral Maxillofac Surg. 2013;51(8):e230-3. DOI: http://dx.doi.org/10.1016/j.bjoms.2013.01.018
5. Porter CJ, Tan ST. Congenital auricular anomalies: topographic anatomy, embryology, classification, and treatment strategies. PlastReconstr Surg. 2005;115(6):1701-12. PMID: 15861078 DOI: http://dx.doi.org/10.1097/01.PRS.0000161454.08384.0A
6. Nakajima T, Yoshimura Y, Kami T. Surgical and conservative repair of Stahl's ear. Aesthetic Plast Surg. 1984;8(2):101-7. DOI: http://dx.doi.org/10.1007/BF01575252
7. Kaplan HM, Hudson DA. A novel surgical method of repair for Stahl's ear: a case report and review of current treatment modalities. PlastReconstr Surg. 1999;103(2):566-9. PMID: 9950546 DOI: http://dx.doi.org/10.1097/00006534-199902000-00031
8. Nakayama Y, Soeda S. Surgical treatment of Stahl's ear using the periosteal string. PlastReconstr Surg. 1986;77(2):222-6. PMID: 3945685 DOI: http://dx.doi.org/10.1097/00006534-198602000-00008
9. Lindford AJ, Hettiaratchy S, Schonauer F. Postpartum splinting of ear deformities. BMJ. 2007;334(7589):366-8. PMID: 17303887 DOI: http://dx.doi.org/10.1136/bmj.39063.501377.BE
10. Chongchet V. A method of antihelix reconstruction. Br J Plast Surg. 1963;16:268-72. PMID: 14042756 DOI: http://dx.doi.org/10.1016/S0007-1226(63)80120-4