



Aspiration with Compression Dressing Vs through and Through Sutures over Button in Management of Auricular Seroma: A Comparative Study

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ABSTRACT:BACKGROUND: Auricular seroma or pseudocyst is a cystic swelling with a collection of serous fluid between auricular cartilage and the perichondrium. Seroma can develop spontaneously or after surgery or trauma to the ear. Successful treatment of these seroma remains a challenge because of their high propensity for recurrence.

METHODS: A total of 40 patients with auricular seroma were randomly categorized into two groups A and B with 20 patients in each group. In Group A patients, simple aspiration followed by sutureless compression dressing was done and in Group B patients, incision and drainage followed by through and through suturing over buttons placed over both the sides of pinna as pressure splints was done under local anaesthesia. Both the procedures were performed under aseptic conditions.

RESULTS: Overall, 90% of the affected persons were males. The recurrence rate was 20% for group A and 5% for group B. Some forms of cosmetic deformity were seen in 15% of group A patients. The percentage of patients who developed perichondritis was 10% for both the groups.

CONCLUSIONS: Both the methods used in our study are simple, effective, minimally invasive, cost effective and can be done on an OPD basis. Although the results of both the groups were same in terms of post-op perichondritis the outcomes are better in Group B in terms of less chance of recurrence and also less chances of cosmetic deformity of the pinna.

Keywords: auricular seroma, aspiration, through and through suturing, buttons.

I. INTRODUCTION:

Auricular seroma or pseudocyst is a cystic swelling with a collection of serous fluid between the auricular cartilage and the perichondrium. Seromas can develop spontaneously or after surgery or trauma to the ear.¹ Males are usually affected with mostly unilateral presentation. They

can be distinguished from other lesions of the pinna because of the smooth surface, cystic and painless, and fluctuant nature over the swelling.² Successful treatment of auricular seromas is challenging because of their high propensity for recurrence due to re-accumulation of fluid.

Over the years, several methods of treatment have been advocated. Various treatments in literature include: simple aspiration, repeated aspiration combined with physiotherapy, aspiration with intralesional steroid, aspiration with pressure dressings, incision and drainage with pressure dressing, incision and drainage with corrugated drain placement, excision and packing, injection of 1% tincture of iodine, buttons as pressure splints or suturing through and through after aspiration.³⁻⁵ Medical modalities like corticosteroids, minocycline, use of fibrin glue has been advocated. Other more invasive techniques include incision and drainage of the cavity followed by obliteration by curettage, window procedure etc. The invasive techniques are known to result in high risk of perichondritis, abscess formation, cauliflower deformity and may be followed by recurrence.⁶ The aim of treatment is to successfully resolve the seroma without damaging underlying healthy cartilage, thus maintaining the normal contour of auricle and to prevent recurrence.

II. METHODS:

This is a prospective study conducted at Hi-Tech medical College and Hospital, Bhubaneswar in the period between September 2018 to August 2020. In this period 40 patients presenting with auricular seroma were received at the OPD of ENT and HNS.

Inclusion criteria were seroma of pinna with no specific history, traumatic origin.

Exclusion criteria were: (1) extremes of age (<10 years, >60 years), (2) Pseudocysts which were infected or have developed perichondritis, (3) patients with systemic conditions which will impair

healing process eg. Diabetes mellitus, (4) patients having coagulopathies.

Initial history of all the patients was taken. The patients were randomly categorised into two groups A and B with 20 patients in each group. Informed consent was taken, viral screening and routine blood investigations including coagulation profile were done. All the patients were counselled regarding the respective procedures and the

possible complications and were asked to participate in post procedure follow ups.

In Group A patients, without local anaesthesia a widebore needle was used with a 10cc syringe to aspirate the swelling at its most dependant part under strict aseptic conditions until the swelling disappeared following which topical antibiotic ointment was applied and tight pressure dressing done with mastoid bandage [Figure 1].



Figure 1.

In Group B xylocaine skin test was done. Local infiltration of injection 2% xylocaine with 1:200000 adrenaline was given at the site followed by at the post auricular and pre auricular region. An incision was given with a 11 number B.P. blade

over the most dependant part of the swelling. The collection was drained followed by multiple sutures given through and through using 3-0 ethilon round body needle over two buttons, one on each surfaces of pinna as pressure splints [Figure 2,3].



Figure 2.



Figure 3.

Both group of patients were administered oral antibiotics, oral anti-inflammatory drugs ,topical antibiotic ointment and discharged. They were asked for followup on 3rd, 7th and 14th post-op day and at the end of two months. All the patients were asked to report immediately if pain and/ or swelling occurred. The pressure dressings in Group A and the through and through sutures along with buttons in Group B were removed on day 7. The outcomes of the two groups of the patients on follow up were analysed, tabulated and compared.

III. RESULTS:

A total of 40 patients were studied of which 36 were males(90%) and 4 female(10%). Complete resolution was seen in 100% of cases. The recurrence rate was 20% for group A and 5% for group B. The percentage of development of perichondritis was 10% for both the groups. Other minor complications like discoloration of skin, pain, thickening of pinna were seen temporarily in both groups which usually subsided by 14th day. Some cosmetic deformity is seen in 15% of Group A patients.

Table1: Age distribution of patients.

Age Distribution in years	Number of patients(n=40)	Percentage
11-20	3	7.5%
21-30	7	17.5%
31-40	10	25%
41-50	14	35%
51-60	6	15%

Table2: Data in terms of recurrence.

Groups	Number of patients(n=5)	Percentage
Group A	4	20%
Group B	1	5%



Table3: Data in terms of abscess formation and subsequent perichondritis.

Groups	Number of patients(n=4)	Percentage
Group A	2	10%
Group B	2	10%

Table4: Data in terms of cosmetic deformity.

Groups	Number of patients(n=3)	Percentage
Group A	3	15%
Group B	0	0%

IV. DISCUSSION:

Auricular seroma or pseudocyst was first reported by Hartmann in the year 1846.⁷The cavity is devoid of any epithelial lining and hence was called “pseudocyst” by Engel. The exact pathogenesis is unclear but many theories have been forwarded. The differential diagnosis includes subperichondral hematoma caused by accumulation of blood secondary to trauma, relapsing perichondritis, and cellulitis. In the present study, auricular seroma was predominantly observed in males as supported by several other studies conducted by Tan et al.⁸ and Lim et al.⁹. The strikingly high prevalence in males was due to the differential actions of oestrogen and testosterone in inducing cytokines, mainly IL-1.¹⁰ The IL1 is an important mediator of inflammation and cartilage destruction. It also induces IL-6 which stimulates chondrocyte proliferation. Repeated minor trauma like ear pulling, sleeping on hard pillow blunt trauma, wearing helmet can be a cause as validated by detection of LDH in analysis of fluid from auricular seroma.¹¹

Aspiration and pressure dressing was the one of the earliest recognised method of treating seroma pinna. It is simple, minimally invasive, cost effective, requires no local anaesthesia and can be done in OPD basis. But it is difficult to maintain pressure on both sides of pinna in place long enough to effectively prevent recollection. It has shown to have higher recurrence rate found by Ghanem et al. similar to our study.

The incision and drainage through and through suturing over buttons on either side as pressure splints as advocated in our study is a simple, less time consuming and effective method with the advantage that it does not require dressings, cost effective and can be done in OPD basis.

Cohen had reported about 93% of these cases occur in males which is similar to the present study 90%.¹²The mean age of presentation is 38.75 years which is similar to that found by Tan et al.¹³

V. CONCLUSION:

Auricular seroma is rare and benign condition but it is disturbing to both the patient because of its ungainly appearance and the physician in deciding the appropriate line of management owing to its propensity to recur and at times deformity. There are multitude options available for its management.

The methods put forward in this study are simple, effective, minimally invasive, cost effective and can be done on OPD basis. Although the results of both the groups were same in terms of post-op perichondritis, the outcomes are better in Group B patients in whom incision and drainage followed by through and through suturing over buttons was done in terms of less chance of recurrence and also less chance of post-op cosmetic deformity of the pinna.

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