



ORIGINAL ARTICLE

**Pseudocyst of Pinna: Recurrence free Approach with drain placement - A Tertiary care Experience**

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**Abstract**

**Background:** Pseudocyst (seroma) of pinna is a clinical condition where there occurs accumulation of serous fluid between the skin and perichondrium layer either due to trivial trauma or degeneration. Treatment of this condition is challenging as there are high chances of recurrence and cosmetic disfigurement.

**Methodology:** 20 clinically diagnosed auricular seroma patients were studied and compared with needle aspiration technique & Incision and drainage with drain in situ technique and results were compiled.

**Results:** All patients tolerated procedure well. Patients who underwent needle aspiration and pressure dressing had 40% recurrence when compared to drain in situ technique with no recurrence and disfigurement of pinna on follow up of 6 months.

**Conclusion:** Incision and drainage with drain in situ of Pinna seroma is cost effective & simple method with almost nil recurrence rate when compared to needle aspiration technique with good results.

**Keywords:** Seroma, Pinna, Recurrence, Pseudocyst, Chondromalacia

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## Graphical Abstract

Pseudocyst of Pinna: Recurrence free Approach with drain placement -A Tertiary care Experience	
	<p>Pseudocyst (seroma) of pinna is a clinical condition where there occurs accumulation of serous fluid between the skin and perichondrium layer either due to trivial trauma or degeneration. Treatment of this condition is challenging as there are high chances of recurrence and cosmetic disfigurement.</p>
<p>Varunkumar J et al</p>	<p>20 clinically diagnosed auricular seroma patients were studied and compared with needle aspiration technique &amp; Incision and drainage with drain in situ technique and results were compiled.</p>
<p>Department of Otorhinolaryngology</p>	<p>Incision and drainage with drain in situ of Pinna seroma is cost effective &amp; simple method with almost nil recurrence rate when compared to needle aspiration technique with good results.</p>
<p>National Board of Examinations Journal Of Medical Sciences (NBEJMS)</p>	<p><i>Seroma, Pinna, Recurrence, Pseudocyst, Chondromalacia</i></p>

### Introduction

Pinna seroma is an uncommon, painless swelling of pinna not associated with signs of inflammation until infected characterised by enchondral cyst formation [1]. The etiopathogenesis of the disease still remains inconclusive. Hartmann in 1846 reported this condition first followed by 12 intracartilagenous cyst. Engel in 1966 coined the term auricular pseudocyst for this condition.

Over several years there were modifications and research undergone for the treatment of this condition involving wide bore needle aspiration, incision and drainage with drain placement, as if left untreated can lead to complications of infected seroma or perichondritis. Our study is to compare the outcomes of needle aspiration technique with drain placement techniques and to postulate the cost effectiveness and cosmetic outcomes [2].

### Methods

This was a prospective comparative study done at a tertiary health care hospital. The duration of the study was 1 year and patients presented with pinna swelling were included in this study. Patients were explained about the nature of the condition and the outcome and were studied with informed consent. Out of 20 patients under

random purposive method, 10 underwent wide bore needle aspiration technique and pressure dressing, rest 10 taken up for incision and drainage with drain in situ Table 1.

#### Aspiration with wide bore Needle

A wide bore needle or 16 gauge spinal needle with syringe was used in this technique. Under all aseptic precautions wide bore needle was introduced gently at the maximum prominence of the swelling and aspirated with syringe until the swelling reduced followed by tight pressure dressing was given.

#### Incision and Drainage with drain placement

Under all aseptic precautions, parts prepared and draped. Local anaesthesia with 2% lignocaine infiltration was given post aurally to block the great auricular nerve and auriculotemporal nerve and also given around the incision site. Incision made with 15 number surgical blade at the most dependent site and fluid drained was sent for microbiological study. A small drain was kept either a rubber tube or corrugated drain or glove drain based on the availability and the drain is secured with sutures as shown in the image. Then pressure dressing was given and patient was asked to follow up till 7 days and drain is

removed subsequently after the purpose is served.

If patients of needle aspiration fails then they are taken for drainage and drain placement in subsequent visits.

**Inclusion criteria**

Patients coming to ENT Outpatient Department with painless boggy swelling of the pinna.

Patients willing for the study

**Exclusion criteria**

Patients having hematoma auris or perichondritis and patients not willing to take part in the study.

**Results**

Table 1: Techniques used for Seroma Treatment

	Widebore Needle Aspiration	Incision & Drainage with Drain Insitu
Male	9	8
Female	1	2
Total	10	10

Out of 20 patients in our study 10 underwent widebore needle aspiration and 10 patients underwent incision and drainage with drain placement Table 1.

Table 2: Distribution of Cases according to Age

Age group (years)	Number of Cases in the group (n)	Percentage (%)
15-20	0	0
21-25	0	0
26-30	2	10
<b>31-35</b>	<b>8</b>	<b>40</b>
<b>36-40</b>	<b>5</b>	<b>25</b>
41-45	2	10
46-50	2	10
51-55	1	5

Our patients were between the age group of 15–55 years. Most of the patients were in 3<sup>rd</sup> and 4<sup>th</sup> decade Table 2.

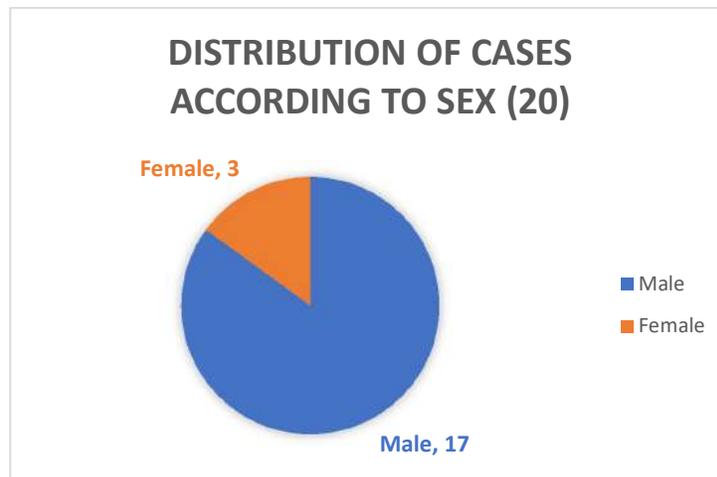


Figure 1. Distribution of Cases according to Sex

Out of 20 patients in our study, 17 were male and 3 females Figure 1.

Table 3: Recurrence in treated cases

Procedure	Number of Cases primarily done	Recurrence (n-number of cases)	Percentage (%)
Widebore Needle Aspiration	10	4	40
Incision & Drainage with Drain Insitu	10	0	0

The above tabulation shows 40% recurrence in our study in patients who underwent wide bore needle aspiration technique comparing with the drain placement technique Table 3.

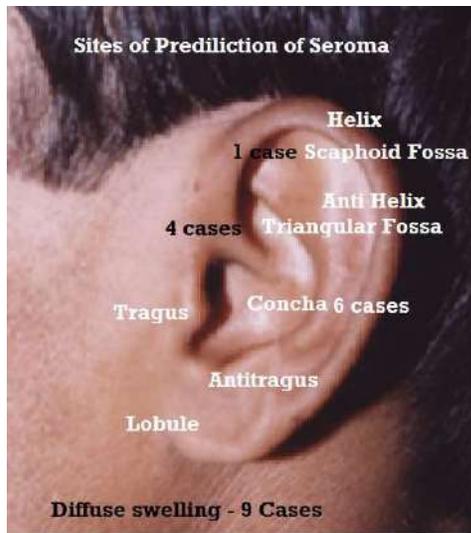


Figure 2. Distribution of seroma identified in our study

The image depicts the distribution of seroma cases in our study Figure 2.

Table 4. Materials used and their complications in Drainage Placement

Materials used for Drainage	Number of Cases	Infected Cases
Rubber drain	7	0
Corrugated drain	2	1
Glove drain	1	0

Table 4 shows the materials used in drain placement technique, Out of 10 cases underwent drain placement technique 1 case got infected with corrugated drain.

Table 5. Sequelae or Complications of the procedure performed

Sequelae\Complications	Procedure	
	Widebore Needle Aspiration (n-number of cases )	Incision & Drainage with Drain Insitu (n-number of cases)
Recurrence of swelling	4	0
Thickening of skin	0	4 (Figure 2)
Cosmetic deformity	0	0
Infection	3	1



Figure 3. Showing post drain placement thickening of skin



Figure 4. Clinical pictures of Pinna Seroma with Site predilection



Figure 5: Post Wide Bore Needle Aspiration showing Yellow sterile fluid



Figure 6. Post Drainage procedure pictures with drain tube insitu

Table 5 tabulates the sequelae or complications of the procedure performed in our study. Patients who underwent wide bore needle aspiration technique had 4 recurrences and 3 patients had secondary infection. Patients who underwent incision and drainage with drain placement technique had infection in 1 case and 4 cases had thickening of skin.

### Discussion

Pseudocyst (seroma) of pinna is a condition where there occurs accumulation of serous fluid between the skin and cartilage either due to trivial trauma or degeneration. It is also called as pinna seroma/benign idiopathic chondromalacia/chondromalacia of pinna. Male gender are more commonly affected with this condition, postulating the use of helmets while driving or box fighting.

Hansen 1967 [3], has documented that pinna seroma was more commonly occurring in males and Shanmugam et al. (1985) [4] reported two cases of pinna seroma in females, which is comparable with our study results displayed in Figure 1.

Engel [5] cited that scaphoid fossa & triangular fossa in pinna are the most common sites of predilection which is comparable with our study showing almost 5 cases in these regions (Figures 2 and 4).

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Choi et al. [6] postulated that it is due to degenerative process of the cartilage of the pinna resulting in the serous sterile fluid (oily yellow colour) Figure 5 [7] in the cavity and also added that cavity was filled with granulation tissue rather than epithelium and coined the name “Pseudocyst”.

Engel witnessed that wide bore aspiration of the swelling with pressure dressing had recurrence of the swelling as shown in the Table 3, whereas Zhu et al. [8] did incision and drainage with drain placement and showed good results (Table 4 and Figure 6) [9].

In our prospective study, patients were kept under follow up for a period of 6 months to watch out for sequelae of the disease and procedure done as shown in Table 5.

### Conclusion

There are different modalities of treatment for pinna seroma concerned with the aim of draining the contents of the swelling and preventing recurrence. Our study showed that the incision and drainage with drain placement method could be performed in pinna seroma cases with good results.

### Conflicts of interest

The authors declares that they do not have conflict of interest.

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