

Original Research Article

Pseudocyst of pinna: a clinical experience

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ABSTRACT

Background: Pseudocyst of pinna is an intracartilagenous accumulation of fluid in pinna and is hardly encountered in routine ENT practice. The etiology is unclear. It is seen to affect most commonly middle-aged males. Medical treatment is ineffective. Various treatments are suggested in the literature. The aims of the paper were to study the clinical and demographic characteristic of patients with pseudocysts.

Methods: Forty patients were diagnosed with pseudocyst of the auricle between July 2016 and July 2019 on the basis of clinical characteristics, colour of aspirated fluid and absence of infection. Clinical and demographic characteristics were noted.

Results: Out of 40 patients only five were females. Involvement of left side was seen more than right one. None had bilateral involvement. Adults in the age group of 31-45 were commonly affected. Most common site of involvement was triangular fossa.

Conclusions: Pseudocyst of the pinna is a benign condition characterized by intracartilagenous accumulation of fluid. The disease is seen commonly unilaterally in middle aged males. Many modalities of treatment have been recommended in the literature with varied recurrence and failure rates.

Keywords: Intracartilagenous, Left side, Pseudocyst, Triangular fossa, Trauma, Unilateral

INTRODUCTION

A pseudocyst of the auricle is a rare benign intracartilagenous cystic swelling first described by Hartman in 1846.¹ It was named auricular pseudocyst by Engel in 1966. Pseudocyst was termed as intracartilagenous cysts by Hansen in 1967 but he agreed that the term pseudocyst is more appropriate.^{2,3} The synonyms for the term are endochondral pseudocyst, intracartilagenous cyst, cystic chondromalacia and benign idiopathic cystic chondromalacia.⁴ It typically involves the scaphoid fossa, triangular fossa of the antihelix.⁴

These cysts occur more commonly in Chinese and white men and much less frequently in Japanese, Malaysian, and black individuals.⁴ The mean age of presentation is 35-40 years with preponderance for adult males.⁵

The size of pseudocysts ranges from 1-5 cm and typically develops in 4-12 weeks.⁵ Majority are unilateral and bilateral lesion is usually seen in pediatric population.⁶ The fluid aspirated is usually viscous straw yellow. Occasionally a clear pale yellow transudative serous fluid maybe encountered mimicking auricular seroma.⁴ Histologically, pseudocyst lacks epithelial lining (hence pseudocyst) and is characterized by an intracartilagenous accumulation.⁷ The etiology is unclear, but many investigators believe that repeated minor injuries and chondrocyte lysosomal enzymes are responsible for intracartilagenous fluid accumulation.⁴

The diagnosis is based on the clinical presentation, characteristics of the aspirated fluids, and no evidence of infection.⁴ The differential diagnosis of this condition includes chondrodermatitis helices, cellulitis, sub

perichondral hematoma secondary to trauma, and relapsing polychondritis.⁵

Medical treatment is unfortunately ineffective.⁴ Treatment options are Simple aspiration followed by pressure dressing applied on the pinna ; oral corticosteroids alone; aspiration of fluid followed by injection of various substances like steroids, 50% trichloroacetic acid, triamcinolone; needle aspiration plus bolstered pressure; surgical curettage and fibrin sealant; treatment by incisional biopsy; Resection of the anterior cartilaginous leaflet of the pseudocysts with repositioning of the overlying skin flap or the so-called deroofting technique.⁴

METHODS

This prospective cross-sectional study was done in the Department of ENT and Head and Neck surgery, Government Medical College, Srinagar, Jammu and Kashmir for a period of three years from July 2016 to July 2019.

Inclusion criteria

Patients with swelling of pinna which was suggestive of pseudocyst on the basis of clinical characteristics, characteristics of aspirated fluids with no evidence of infection.

- All age groups.
- Non tender, cystic swellings without the inflammatory signs.
- Absence of infection of aspirated fluids sent for culture and sensitivity.

Exclusion criteria

- Patients with sub perichondral hematoma secondary to trauma, chondrodermatitis, helices, cellulitis and relapsing polychondritis.
- Previous history of pseudocysts.
- History of any dermatological disease.
- History of any otological surgery.

Forty patients with pseudocysts of pinna who met the above inclusion n exclusion criteria were enrolled in the study. The patients were examined in detail and all relevant history including the demographic and personal history were included. The details of each patient were recorded in a proforma already designed for this study. All the data was entered in Microsoft excel and further tabulated. No ethical clearance was required as this was purely an observational study.

RESULTS

Total number of patients enrolled in the study were 40. Most of them (35) were males while 5 of them were females. Maximum numbers (24) of patients were in the

age group of 31-45 comprising about 60% of study population. No patient was below the age of 15 years. The lowest number (1) of patients were seen in the age group of 61-70 (Table1).

Table 1: Age and sex distribution.

Age group	Male	Female	Total
<15	0	x	0
15-30	6	2	8
31-45	21	3	24
46-60	7	x	7
61-70	1	x	1
Total	35	5	40

Maximum number (22) of patients had swelling involving predominantly triangular fossa (Figure 1) comprising of 55% of patients followed by involvement of concha (Figure 2). Minimum number (2) involved scaphoid fossa/ had diffuse swelling (Figure 3) (Table 2).

Table 2: Site of involvement of pinna.

Site of involvement	No of patients
Concha	8
Triangular fossa+ scaphoid fossa+ antihelix	6
Triangular fossa	22
Scaphoid fossa	2
Diffuse	2
Total no of cases	40

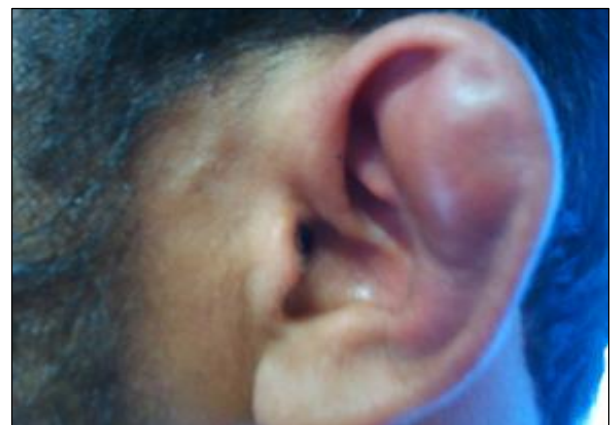


Figure 1: Pseudocyst predominantly involving triangular fossa.

Majority (26) were from urban locality while 14 patients were from rural locality. The maximum number (22) of patients were Government servants by profession followed by students (14). Only four businessmen were seen in the study group (Table 3).

The volume of the fluid ranged from 0.5 to 5 mL with majority (31) having less than 2.5 cc of collection (31/77.5%) (Table 4).



Figure 2: Pseudocyst predominantly involving concha.



Figure 3: Pseudocyst having diffuse involvement.

Table 3: Demographic features of patients.

Feature	No of patients	
Residence	Rural	14
	Urban	26
Profession	Labourers	0
	Government service	22
	Business	4
	Student	14

Involvement of both right and left ears was seen, but left ear was involved more than right with 25 and 15 cases respectively. None of the cases had bilateral pseudocyst. The fluid aspirated was straw serum colored in majority of patients (28/70%) while few of them (5/12.5%) had serosanguinous fluid. The pure yellow colour fluid was seen in only seven patients (Table 4).

Table 4: Clinical characteristics of patients.

Characteristic	Distribution	No of patients
Colour of fluid	Serosanguinous	5
	Straw	28
	Yellow	7
Size of swelling (cm)	0.5-2.5	30
	2.6-5	10
	>6	x
Volume of fluid (ml)	0.5-2.5	31
	2.6-5	9
	>6	x
Side predilection	Right	15
	Left	25
	Unilateral	40
	Bilateral	x
Time taken to develop fully(weeks)	1-3	7
	4-8	30
	9-12	3
Trauma	Minor trauma	4
	No history of trauma	35
	Major trauma	1

The size of the swelling ranged from 0.5 to 5 cm in largest diameter with majority (30/75%) having size less than 2.5 cm (Table 4).

Time taken to develop swelling ranged from 1-12 weeks with majority (30/75%) taking 4-8 weeks to develop. Seven patients developed swelling within 1-3 weeks. Majority (35/87.5%) had no prior history of trauma to pinna. Only (4/10%) had history of minor trauma (Table 4).

DISCUSSION

Pseudocysts of the auricle occurs more commonly in Chinese and White men.⁴

Cases were not histologically confirmed but they shared all the characteristics of pseudocysts. The etiology of pseudocysts is unclear, but most investigators accept that chronic low-grade trauma is the major etiological factor of this condition.⁴

Any significant history of trauma was not found in majority of the cases. Reports of pseudocyst by Tuncer et al, Salagado and Tan et al, similarly did not find any significant history of trauma in their series, while on contrary Suhail et al, found history of trauma in majority of patients.^{4,8-10}

Pseudocyst has been reported to involve predominantly males.⁴ Pseudocysts predominantly found in males (87.5%). Similar percentage of affliction of males were reported by Lim et al.¹¹ Some series like that of Engel, Suhail et al, and Hansen found them only in males while

Nazir et al, Shanmugham et al, and Ramadass et al, reported cases in females.^{2-5,12,13}

Pediatric population is rarely affected as seen and in studies of other authors.⁴ However Devlin et al, reported auricular pseudocysts at between 5 and 6 years of age.¹⁴

Most of the patients were from urban areas. Government employees comprised most of the patients followed by student and businessman. On contrary Suhail et al, and Nazir et al, found labourers were most commonly affected.^{4,12} Though authors failed to correlate profession with pseudocysts, but it is believed there is a scope for more studies.

Majority of the pseudocysts were involving triangular fossa followed by concha scaphoid fossa + triangular fossa + antihelix. Engel and Cohen also cited the scaphoid fossa and triangular fossa of the antihelix as the main sites of predilection while Supiyaphun and Decha in contrast noted concha as the most common site of predilection.^{2,15,6} A study by Suhail et al, and Nazir et al, found triangular fossa + scaphoid fossa + antihelix as most common site of predilection.^{4,12}

Pseudocysts usually present unilaterally.⁴ All of the pseudocysts had unilateral presentation but there are reports of bilateral presentation.¹⁵

Pseudocysts occur more commonly on right side as reported by many authors in contrary to what it was observed.⁴ While study by Supiyaphun and Decha and Nazir et al, noted pseudocyst to occur more commonly on the left side as seen in this study.⁶

Typically, the straw-yellow viscous fluid similar to olive oil is found in the pseudocysts; however, serosanguineous and serous fluid may sometimes be observed.⁴

The volume of the aspirates ranges from 0.5 and 10 ml.⁴ It was found in between 0.5-5 ml. It was found to be between 1 ml -3.5 ml and between 1 - 4 ml by Suhail et al, and Nazir et al, respectively.^{4,12} Typically, the swelling develops in 4-12 weeks.⁵ Majority of the patients developed full blown swelling between 4-8 weeks.

The size ranges from 1 to 5 cm in diameter and it was found in between 0.5 to 5cm. Similar to authors findings Nazir et al, found it to be 1.5 and 4.5 cm while Suhail et al, found it to be in the range of 2-4 cm.^{4,12}

CONCLUSION

Pseudocyst of the pinna is a benign condition that is commonly encountered in middle-aged persons. The size is rarely more than 5 cm and fluid aspirated is usually straw coloured. It occurs more commonly in males and is rarely bilateral.

Chronic low-grade trauma is one of the etiological factors in its development. Many modalities of treatment have been recommended in the literature with varied recurrence rate.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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