

Proper Surgical Management of Pseudocyst of Auricle: Our Experience At Tripura Medical College, Northeast India

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Abstract: An auricular pseudocyst is an asymptomatic cystic swelling with fluid accumulation between the intracartilaginous spaces of the auricle, which lacks an epithelial lining, so called pseudocyst. Engel in 1966, first reported the pseudocyst of auricle in the Chinese population. Twenty two patients were diagnosed with pseudocyst of pinna who were presented with asymptomatic painless cystic swelling over anterior aspect of auricle and were managed at ENT Deptt. of Tripura Medical College and Dr. BRAM Teaching hospital between December 2013 to December 2015 and all were treated by surgical deroofting of the cyst along with buttoning under local anaesthesia, assuming standard surgical treatment of pseudocyst of pinna. Restoration of the normal architecture of the auricle with no recurrence is the main goal of the treatment. The mean age of study population is 35.7 years with male preponderance (68%) located mostly on left ear (63.6%) with concha (45%) is the dominant fossa. All 22 cases shows excellent surgical outcome with no recurrence and better cosmetically acceptance.

Keywords: Auricle, Chinese, Deroofing, Pseudocyst, Male preponderance

I. INTRODUCTION

An auricular pseudocyst is an asymptomatic cystic swelling with fluid accumulation between the intracartilaginous spaces of the auricle, which lacks an epithelial lining and involves triangular fossa, concha fossa and scaphoid fossa of the auricle. It is also known as an intracartilaginous cyst¹, endochondral pseudocyst, and idiopathic cystic chondromalacia². They involve spontaneous swelling without history of trauma, and aspiration produces a viscous straw-yellow colored fluid^{1,3,5}. Engel in 1966, first reported the pseudocyst of auricle in the Chinese population. It is predominantly seen in young male adults, being uncommon before the age of 20 years and after 60 years⁶. The aim of treatment is to preserve the anatomic architecture and intact appearance of the pinna and prevent recurrence. However, medical treatment and simple aspiration are usually ineffective with high recurrence rates^{1,4,5}. Without treatment, permanent deformity due to fibrosis and cartilaginous deposition may cause irreparable injury to the pinna. Many other treatment modalities have been proposed including incision and drainage, aspiration followed by treatment with intralesional steroids, or sclerosing agents injected into the cystic cavity with a local compression dressing such as clothing button bolster, compression suture therapy⁴ or clip compression dressing⁵.

II. MATERIALS AND METHODS

22 patients were diagnosed with pseudocyst of pinna who were presented with asymptomatic painless cystic swelling over anterior aspect of auricle and were managed at ENT Deptt. of Tripura Medical College and Dr. BRAM Teaching hospital between December 2013 to December 2015. Initial, 4 cases shows recurrence after treating with aspiration by wide bored needle followed by inj triamcilone (inj kenacort 10mg/1ml) within 10-15 days and next 18 cases we did not try any conservative treatment. All treated by surgical deroofting of the cyst along with buttoning under local anaesthesia, assuming standard surgical treatment of pseudocyst of pinna. The helical incision line was made on the skin overlying the pseudocyst, and the skin flap was elevated by carefully separating the overlying skin and anterior leaflet of cartilage until the pseudocyst was fully exposed. The anterior leaflet of the pseudocyst was excised along the surrounding boundary of the cartilage with drainage of olive oil colored fluid. After the anterior leaflet had been totally removed, curettage of the posterior leaflet was performed to remove any debris or soft granulation tissue. The skin flap was repositioned and sutured with

a 4-0 nylon simple suture along the incision line. Two iodine gauzes were then sutured double-sided over the surgical lesion as a compression dressing and retained for at least one week until the sutures were removed. Button was removed after an average period of 7-10 days. All patients gave informed written consent and procedure was performed in an outpatient setting.

III. RESULTS

Age of the study population was between 17-60yrs with mean age of study population is 35.7 years. There were 15 males (68.18%) and 7 females (31.81%) in this study group. 14 patients (63.6%) had left sided disease and remaining 8 patients (36.3%) had on right sided disease. 10 (45.45%) pseudocysts were located on the concha fossa, six (27.27%) on the triangular fossa, and 6 (27.27%) on the scaphoid fossa. The average duration of the pseudocysts were 10-45 days with a lesion size ranging from 2 to 4 cm. The patients were followed for 3-5 months and 2 patients developed perichondritis initially followed by cauliflower ear after the surgery. The patient was diabetic, underlying comorbidity may have contributed to the unfavourable outcome, otherwise the results were cosmetically acceptable.

Table 1. Summary of reported cases of auricular pseudocyst

Cases	Age (yrs)	Gender	Side	Location	Size (cm)	Duration (days)	Aspiration	h/o Trauma	Follow Up (mnts)	Complications	Recurrences
1	17	M	L	Concha	2	15	done	no	3	no	no
2	22	F	L	Concha	3	20	done	present	5	C.F	no
3	40	M	L	SF	3	21	done	no	4	no	no
4	35	M	R	Concha	4	25	done	no	5	no	no
5	30	F	L	SF	3	15	no	no	3	CF	no
6	25	M	L	Concha	2	30	no	no	4	no	no
7	32	M	R	TF	4	16	no	present	5	no	no
8	45	F	R	SF	4	18	no	no	5	no	no
9	30	M	L	Concha	3	25	no	no	4	no	no
10	35	M	L	TF	3	35	no	no	4	no	no
11	50	M	R	Concha	2	15	no	no	4	no	no
12	25	F	L	TF	3	12	no	no	3	no	no
13	55	M	R	Concha	4	14	no	no	5	no	no
14	42	M	L	SF	2	16	no	present	4	no	no
15	46	F	L	SF	3	12	no	no	5	no	no
16	28	M	L	TF	4	14	no	no	4	no	no
17	60	F	R	Concha	3	40	no	no	5	no	no
18	32	M	R	SF	2	15	no	no	5	no	no
19	46	M	L	TF	4	12	no	no	4	no	no
20	28	M	L	Concha	3	10	no	no	3	no	no
21	36	F	R	TF	2	12	no	present	4	no	no
22	27	M	L	Concha	3	45	no	no	5	no	no

M= Male, F= Female, L= Left, R= Right, SF= Scaphoid fossa, TF= Triangula fossa, CF= Cauliflower.

IV. DISCUSSION

Pseudocyst of the auricle is a rare benign condition of ear that is caused by intracartilaginous collection of serous fluid in the anterior aspect of the auricle. It was first reported by Hartmann in 1846 and first described in the English literature in 1966 by Engel. The cavity is not lined by epithelium hence termed pseudocyst by Engel⁷. It has been addressed by many terms, e.g. endochondral pseudocyst, intracartilaginous cyst, cystic chondromalacia, and benign idiopathic cystic chondromalacia. They are asymptomatic, cystic swelling of pinna resulting from accumulation of sterile fluid within unlined intracartilaginous spaces⁸. It is spontaneous accumulation of a sterile, oily yellowish fluid, with no signs of inflammation⁹. Disease usually involves scaphoid fossa. Men are more affected than women. Mostly affected patients belong to young and healthy population. Cohen¹⁰ reported that 93% of the cases occur in males. Other studies have reported a similar male preponderance (Tan¹¹, 87.5%; Lim¹², 87.8%). In our study also we got similar result with male preponderance (68.18%). The mean age of our patients was 35.7 years, which is similar to that reported by Choi⁶ (42.8 years) and Tan¹¹ (38.2 years). Choi⁶ suggested that repeated minor trauma led to an overproduction of glycosaminoglycans, which starting as microcysts within the cartilage, coalesce to form a larger lesion or pseudocyst. Tan¹¹ found a positive history of trauma in only 10% of patients, whereas Cohen¹⁰, reported a history of trauma to the lesional site in 30% of patients. In our study, 4 (18.18%) patients gave a history of trauma, which is almost similar with others study. In our study, 10 (45.45%) pseudocysts were located on the concha fossa, six (27.27%) on the triangular fossa, and 6 (27.27%) on the scaphoid fossa.. Choi⁶ described scaphoid fossa (80.6%) as being the most common site of pseudocyst. Restoration of normal architecture of the

auricle with no recurrence is the main goal of the treatment. Various treatments reported in literature include simple aspiration, intralesional injection of corticosteroids and aspiration in combination with bolstered pressure sutures, incision and drainage of the cavity followed by its obliteration by curettage, sclerosing agent, pressure dressing and deroofting. Deroofing that involves removal of the anterior cartilaginous leaflet of pseudocyst with repositioning of the overlying flap of skin followed by buttoning which we have tried in our study. Surgical deroofting of the pseudocyst was first described by Choi⁶ in 31 patients with no recurrence and cosmetically good results in 90% of the patients. Lim¹² used buttoning as a compression method, in 41 patients and reported no recurrence with good cosmetic outcome in all the patients. Chang¹³ reported similar results in 10 patients of pseudocyst in whom deroofting was done. In our study we have done similar procedure with no recurrence with better cosmetic result (91%). So surgical deroofting of the cavity followed by buttoning was associated with 0% recurrence and offered a cosmetically acceptable result in all cases. Buttoning provides the best form of compression as it offers a constant pressure, is easy to apply, is aesthetically appealing and is patient friendly.

V. CONCLUSION

Pseudocyst of the auricle is a benign condition of the anterior or lateral wall of the pinna with unknown etiology. It can occur in all races. The epidemiological profile of this condition is similar in Chinese and non-Chinese (Indian) population. Study shows most common occurrence in younger age group with slightly male preponderance with common site is conchal fossa region. Though conservative modalities may be the first choice of treatment for auricular pseudocysts but which shows high recurrence rate. However, deroofting surgical technique is a reliable and easy procedure which can achieve an acceptable appearance of the pinna without recurrence when conservative management fails or is refused by the patients.



Fig.1 preoperative picture



Fig. 2 post operative picture

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