



Clinicopathological Study of Patients with Preauricular Sinus Attending a Tertiary Care Hospital of Jharkhand: A Record Based Study

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Abstract

Introduction: A preauricular sinus, also known as a congenital auricular fistula, a congenital preauricular fistula, a geswein hole, an ear pit or a preauricular cyst, is a common congenital malformation characterized by a nodule, dent or dimple located anywhere adjacent to the external ear.

Objectives: 1) To describe the socio-demographic profile of patients with preauricular sinus. 2) To categorise the patients of preauricular sinus on the basis of its laterality and presenting complaints. 3) To categorise the patients of preauricular sinus on the basis of treatment modality and recurrence.

Materials and Methods: The present study was done on 32 patients of preauricular sinus who presented to the ENT Out Patient Department (OPD) in Rajendra Institute of Medical Sciences (RIMS), Ranchi from June 2015 to November 2016. Templates were generated in MS excel sheet and data analysis was done using SPSS software (version 20).

Design of Study: Record based study.

Results: Preauricular sinus were more common in younger age group (<20 years) 71.88%(n=23), females 53.12% (n=17) and literate 59.38% (n=19). Preauricular sinus were more common in patients from urban background 65.63% (n=21) and non tribal ethnicity 68.75%(n=22). Preauricular sinus were mostly unilateral 78.12% (n=25) and right sided 43.75%(n=14). Left sided preauricular sinus were seen in 34.37% (n=11) while 21.88% (n=7) of all the cases were bilateral. Recurrent discharge (81.25%) was the most common presenting complaint for patients with preauricular sinus, followed by pain (68.75%), swelling(65.63%) and itching(53.13%). Wide excision of the sinus tract had given best results for preauricular sinus, with a low recurrence rate (6.67%).

Conclusion: More than 2/3rd cases of preauricular sinus were in younger age groups and unilateral in more than 3/4th cases. Wide excision of sinus tract showed best results.

Keywords: Clinicopathological, Congenital malformation, Preauricular sinus, Recurrence, Recurrent discharge, Unilateral.

Introduction

Described first by Van Heusinger in 1864, the preauricular sinus is a benign congenital malformation of the preauricular soft tissues.¹ Frequency of preauricular sinus differs depending the population: 0.1-0.9% in the US, 0.9% in the UK, and 4-10% in Asia and parts of Africa.²⁻⁷ Mostly it is noted during routine ear, nose and throat examination, though can present as an infected and discharging sinus. Developmentally, the external ear develops from six eminences on the mandibular and hyoid margin of the first external groove. Failure of the tubercles to fuse with each other or failure of some of these tubercles (hillock) to grow normally may produce a variety of external ear malformation such as congenital preauricular sinus.⁸⁻¹⁰ It is more often unilateral, only occasionally are bilateral forms inherited. Several syndromes, accounting for about 5% of cases, are associated with preauricular pits. These include Branchio-Oto-Renal (BOR) syndrome (structural anomalies of the external, middle, and inner ear, hearing loss, and preauricular pits, lateral cervical fistulas, and renal anomalies), Beck with-Wiedemann syndrome (preauricular pit with asymmetric ear lobes), Mandibulofacialdysostosis (Treacher-Collins Syndrome) and hemcranial microsomia syndrome (auricular pits/fistulas). Most preauricular pits/sinuses remain asymptomatic throughout life unless it is infected.¹¹⁻¹⁴ They can be of cosmetic importance. It may be associated with deafness and renal malformations. Erythema, swelling, pain and discharge are familiar signs and symptoms of infection. The most common pathogens causing infection are Staphylococcal species and, less frequently Proteus, Streptococcus and Peptococcus species.¹⁵ Where it is an isolated, asymptomatic finding, no treatment is required. In the acute phase of infection of a preauricular sinus, intervention is by administration of appropriate antibiotics, where an abscess is present, we do incision and drainage. Recurrent or persistent preauricular sinus infection requires surgical excision of the sinus along with its tract

during a period of quiescence. Various surgical techniques have been described but no one technique gives good results. Incomplete excision is the cause of recurrence; recurrence rates have been reported between 0 - 42%. The standard technique was to excise an ellipse of skin surrounding the preauricular sinus opening and to dissect out the individual tract: the simple sinectomy.

Materials and Methods

This prospective study included the patients of preauricular sinus who presented to the OPD, Department of ENT, RIMS, Ranchi during the period of June 2015 to November 2016. The data were collected from the register, Department of ENT, RIMS, Ranchi. Templates were generated in MS excel sheet and data analysis was done using SPSS software (version 20). The detailed general physical examination and examination of nose, throat and ear were carried out to rule out external ear and middle ear pathology.

Results

Table 1 shows the categorization of patients with preauricular sinus the basis of their socio-demographic profiles. Preauricular sinus were more common in younger age group (<20 years) 71.88% (n=23), females 53.12% (n=17) and literate 59.38% (n=19). They were seen more commonly in patients from urban background 65.63% (21) and non tribal ethnicity 68.75% (n=22).

Table 1. Socio-demographic profiles of patients with preauricular sinus.

Criteria	Groups	Frequency (n=32)	Percentage (%)
Age(years)	< 20 years	23	71.88
	>20 years	9	28.12
Gender	Male	15	46.88
	Female	17	53.12
Ethnicity	Non- tribal	22	68.75
	Tribal	10	31.25
Residence	Urban	21	65.63
	Rural	11	34.37
Literacy	Literate	19	59.38
	Illiterate	13	40.62
TOTAL		32	100

Preauricular sinus were mostly unilateral 78.12% (n=25); right sided cases were more common, presenting in 43.75%(n=14) followed by left sided cases in 34.37% (n=11) patients. Bilateral preauricular sinus were seen in 21.88% (n=7) cases (Table 2).

Table 2. Categorisation on the basis of laterality of preauricular sinus.

Criteria	Groups	Frequency(n=32)	Percentage %
Unilateral	Right	14	43.75
	Left	11	34.37
Bilateral		7	21.88
Total		32	100

Recurrent discharge (81.25%) was the most common presenting complaint for patients with preauricular sinus, followed by pain (68.75%), swelling(65.63%) and itching(53.13%). 3 patients

presented in OPD without any symptoms, only for cosmetic reason (Table 3).

Table 3. Categorisation on the basis of presenting complaints.

Criteria	Groups	Frequency (n=32)	Percentage %
Asymptomatic	No symptoms	3	9.38
Symptomatic	Recurrent discharge	26	81.25
	Pain	22	68.75
	Swelling	21	65.63
	Itching	17	53.13

Wide excision of the sinus tract had given best results for preauricular sinus, low recurrence rate (6.67%). In comparison systemic antibiotics (57.14%) and incision & drainage (42.18%) showed high recurrence rate (Table 4).

Table 4. Categorisation on the basis of treatment modality and recurrence.

Criteria	Treatment	Frequency	Recurrence	Percentage % (Recurrence)
Asymptomatic	Wait & watch	3	-	-
Symptomatic	Systemic Antibiotics	7	4	57.14
	Incision & drainage	7	3	42.86
	Wide excision of sinus tract	15	1	6.67

Discussion

In the present study preauricular sinus were found to be affecting both the sexes, more common in females than in males, as in many previous studies. Some studies show that men and women were equally affected.¹⁶⁻¹⁸ Jimoh *et al* study revealed a male preponderance. Over 3/4th of cases overall are unilateral and most often sporadic. In present study also unilateral (25 cases) involvement was more as compared to bilateral cases (7cases) and left side (14 cases) was found to be more commonly involved than right (11 cases). Previous studies also establish commoner unilateral and higher right sided cases.^{19,20} Preauricular sinuses, once infected, are prone to frequent and recurrent infection hence prior to presentation more than half of the patients had three episodes of infection per year. This is due to residual bacteria in the sinus and susceptibility of the preauricular sinus to

infection. Complete surgical sinus excision eradicates residual sinus bacteria while medications do not result in complete bacteriological cure.

Conclusion

Preauricular sinuses are common in younger age groups, slightly more in females. They are mostly unilateral (right > left), with patients presenting with recurrent discharge, pain, swelling and itching. Wide surgical excision of sinus tract should be done, with minimal recurrence.

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