An Unusual Case of Recurrent Post Aural Abscess

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Received: 11 August 2008 / Accepted: 29 March 2009 / Published online: 3 April 2011
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Abstract Preauricular sinus (PAS) is a common congenital anomaly which is usually asymptomatic and noted on routine otolaryngological examination which requires no treatment. Patients presenting with discharge, recurrent infections and preauricular abscess will require management with antibiotics and surgical extirpation of the sinus tract. We present a rare case of a PAS presenting as a recurrent postaural abscess.

Keywords Preauricular sinus · Postaural abscess

Introduction

Preauricular sinus (PAS) is a common congenital anomaly which is usually asymptomatic and noted on routine otolaryngological examination which requires no treatment. Patients presenting with discharge, recurrent infections and preauricular abscess will require management with antibiotics and surgical extirpation of the sinus tract. We present a rare case of a PAS presenting as a recurrent postaural abscess.

Case Report

A 15-year-old boy presented with swelling and pain in the left postaural region of 1 week duration. He also gave

history of four episodes of abscess in the left postaural region since the past 2 years for which he was treated by incision and drainage with antibiotics. The patient did not give history of hearing loss, discharge from ear or trauma. On ENT examination the patient had a preauricular sinus just below the ascending limb of the helix. On pressing the sinus pit white cheesy epithelial debris were extruded. The external auditory canal and tympanic membrane was normal. The postaural region showed a soft, fluctuant and tender swelling with scars and sinus on the surface.

The audiological examination was normal and the X ray mastoid Schullers view showed a normal pneumatized mastoid air cells. The patient was treated with antibiotics and analgesics and improved. He was provisionally diagnosed as a case of infected postaural sebaceous or dermoid cyst.

After control of infection the patient was taken up for excision of the post aural abscess and sinus. A postaural wedge incision was placed around the abscess area after infiltration with lignocaine and adrenaline. It was seen that on meticulous removal of the fibrotic tissue, a tract was visualized extending anteriorly through the conchal cartilage (Fig. 1). The tract was followed and was seen to be extending into the preauricular sinus (Fig. 2). The sinus pit and tract was removed in toto in combination with a preauricular wedge incision around the preauricular sinus pit. Postoperative period was uneventful and the patient has been asymptomatic since the past 1 year.

Discussion

Preauricular sinus (PAS) is a common congenital anomaly in children which was first described in 1864 by Heusinger [1]. Various terms like preauricular pit, preauricular

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Fig. 1 Postaural incision with sinus tract extending anteriorly

Fig. 2 Sinus tract extending to preauricular sinus

fistula, preauricular tract and preauricular cyst are used synonymously with this condition. It has an estimated incidence of 0.1–10% with higher incidence among Asians and Africans [2].

PAS is formed during 6th month of gestation and is closely related to the development of the auricle. The most accepted theory of development states that it is formed by the incomplete or defective fusion of the six mesenchymal proliferations called the hillocks of His. The other theory describes it as an isolated ectodermal folding which forms an inclusion dermoid during auricular development.

50% cases of PAS are unilateral, occurs sporadically and are on the right side [3]. Bilateral cases are usually inherited and the pattern is of autosomal dominance with reduced penetrance and is linked to chromosome 8q11.1–q13.3 [4]. PAS may also be related to branchiogenic fistulas, hearing loss and renal malformations and a extensive evaluation is necessary to rule out any other malformations.

Due to its embryology it is closely related to the groove between ascending limb of helix and the tragus and

presents as a small opening. The opening can also be along the posterosuperior margin of the helix, the tragus or the lobule. It may be multibranching and ramifying within the preauricular soft tissue and is usually closely related to the perichondrium of the auricle.

In the classical cases of PAS the pits are located anterior to an imaginary line extended from tragus to the posterior margin of the ascending limb of the helix and the patients may present with recurrent abscess in the preauricular region. Variant presentations as seen in our case, the pit is located posterior to the imaginary line with the patient presenting with postauricular abscess which may be confused with other pathology [5].

It is a common anomaly which is usually asymptomatic and is noted during routine ear, nose and throat examination but it may also present as discharging sinus, recurrent infections with abscess and facial cellulitis. The most common pathogens causing infection are *Staphylococcus epidermidis*, *Staphylococcus aureus*, *Streptococcus viridans*, *Peptococcus* sp. and *Proteus* sp. [6]. Postauricular abscess is an uncommon presentation of the PAS with few references in literature [7, 8]. It can be mistaken for other postaural pathology like postaural lymphadenitis, sebaceous cyst, epidermoid cyst, mastoid abscess, perichondritis and branchial cleft cyst. Our patient had reported with recurrent postaural abscess which was treated earlier with incision and drainage and antibiotics.

The principles of treatment are complete excision of the pit and sinus sac during the period of quiescence after treating active infection with antibiotics. Various techniques of excision of classical PAS include anterior and supra-auricular approaches, injection of methylene blue for delineation of tract and use of microscope for magnification. In our case the tract was seen extending through the conchal cartilage and had to be excised by a combined anterior and posterior approach.

The standard technique for excision has a recurrence of 19–42% with the supra-auricular approach reporting a low rate of 5% [9, 10]. The cause of recurrence is usually due to difficult identification of tract in patients with recurrent infections with scarring and fibrosis of the preauricular soft tissue leading to inadequate removal of all the ramifications of the tract. The case is being reported as it is a rare and unusual presentation of a common congenital anomaly. The history of recurrent infections and swellings around the ear along with presence of a preauricular sinus should alert the otolaryngologist regarding the diagnosis.

References

1. Heusinger CF (1864) Hais-Kiemen-Fisteln von noch nicht beobachteter form. Virchows Arch 29:358

2. Lam HCK, Soo G, Wormald PJ, Van Hasselt CA (2001) Excision of the preauricular sinus: a comparison of two surgical techniques. *Laryngoscope* 111:317–319
3. O'Mara W, Guarisco L (1999) Management of the preauricular sinus. *J La State Med Soc* 151:447–450
4. Zou F, Peng Y, Wang X, Sun A et al (2003) A locus for congenital preauricular fistula maps to chromosome 8q11.1–q13.3. *J Hum Genet* 48:155–158
5. Choi SJ, Choung YH, Park K, Bae J, Park HY (2007) The variant type of preauricular sinus: postauricular sinus. *Laryngoscope* 117(10):1798–1802
6. Scheinfeld NS, Silverberg NB, Weinberg JM, Nozad V (2004) The preauricular sinus: a review of its clinical presentation treatment, and associations. *Pediatr Dermatol* 21:191–196
7. Chang PH, Wu CM (2005) An insidious preauricular sinus presenting as an infected postauricular cyst. *Int J Clin Pract* 59:370–372
8. Yeo SW, Jun BC, Park SN et al (2006) The preauricular sinus: factors contributing to recurrence after surgery. *Am J Otolaryngol* 27:396–400
9. Currie AR, King WW, Vlantis AC (1996) Pitfalls in the management of preauricular sinuses. *Br J Surg* 83:1722–1724
10. Prasad S, Grundfast K, Milmoie G (1990) Management of congenital preauricular pit and sinus tract in children. *Laryngoscope* 100:320–321