CASE REPORT

Obstruction of the external auditory meatus secondary to a giant pyogenic granuloma

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SUMMARY

Pyogenic granuloma is a benign lesion of the skin and mucosa commonly known to occur in the head and neck region. The current literature has not yet identified its occurrence within the conchal bowl, a condition that leads to obstruction of the external auditory meatus. We present the case of a 28-year-old man who presented with a history of 3–4 weeks of a rapidly enlarging pedunculated lesion within the conchal bowl of the right ear and conductive hearing loss. Initial management included excision under local anaesthesia. The histological report concluded that it was a pyogenic granuloma. Later, reoccurrence was treated with a more definitive excision under general anaesthesia. During follow-up, the operative site was seen to have healed by secondary intention without reoccurrence. Although a pyogenic granuloma within the conchal bowl is benign, early therapeutic excision is important for histological diagnosis as much as to relieve consequential secondary obstruction and conductive hearing loss.

BACKGROUND

Pyogenic granuloma is also known as lobular capillary haemangioma.¹ It is a benign vascular lesion of the skin and mucosa, which can bleed easily after a

Figure 2 Giant pyogenic granuloma of the conchal bowl of the right ear on the day of presentation.

Figure 1 Giant pyogenic granuloma of the conchal bowl of the right ear on the day of presentation.

minor trauma. It mostly arises in the region of the head, neck, extremities and lastly trunk.

Malignancies such as adenoid cystic carcinoma of the external auditory canal (EAC) have been considered and reported as potential causes of reduced hearing, but they are rare.² Many studies have reported the occurrence of pyogenic granulomas at different sites, including at an ear-piercing site, where they resolved on their own by the removal of the triggering factors or by excision.³ However, thus far, hearing impairment has not been reported secondary to the obstruction of the EAC by a pyogenic granuloma of the conchal bowl of the ear.

CASE PRESENTATION

We present a unique case of a 28-year-old man with no known medical history, who developed a spontaneous pyogenic granuloma of the conchal bowl of his right ear. He presented with a history of rapid growth and a size so large that it occupied the conchal bowl and obstructed the opening of the EAC, ultimately leading to conductive hearing loss. This led him to present acutely to the emergency department. The history of this painless friable swelling was consistent with a rapidly

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Figure 3 Giant pyogenic granuloma of the conchal bowl of the right ear on the day of presentation.

growing lesion measuring 35×25×15 mm in size on the day of presentation (figures 1–3).

On the basis of the patient's history, the lesion reached this size over a period of 3–4 weeks. He could not recall any trauma to this area and denied using cotton buds. On examination, the tympanic membrane was normal. Initially, the patient thought it would settle on its own, but due to its rapid growth and increased size it led to the obstruction of the EAC and eventually resulted in conductive hearing loss.

TREATMENT

The lesion was pedunculated with its narrow base measuring approximately 1 cm. The lesion was then excised under local anaesthesia, for histological diagnosis (figures 4–7). It was easy

Figure 4 Histology picture.

Figure 5 Histology picture.

to remove the obstruction, a procedure that revealed a normal EAC and tympanic membrane. During excision, the EAC bled from the base of the lesion. The base was cauterised and ligated with prolene sutures. The patient was discharged with oral antibiotics on the same day. The histology was reported as a pyogenic granuloma. He was seen as an outpatient a week later for the removal of sutures and was prescribed Fucidin-H ointment, to be used topically on the operation site for the next 2 weeks.

OUTCOME AND FOLLOW-UP

On further follow-up 2–3 weeks later, it was noted that the pyogenic granuloma had reoccurred (figures 8 and 9); the patient was listed for a formal excision of the lesion under general anaesthetic. This time the lesion was excised down to the conchal perichondrium and was left to heal by secondary intention.

Postoperative follow-up after 12 weeks concluded that the conchal wound site was clean, healthy and healing well (figure 10).

DISCUSSION

In a number of studies, giant pyogenic granulomas have been associated with underlying immunosuppression,^{4–6} but in this case, the patient was a young and healthy individual with no history of immune disorder or compromise. However, the size of the pyogenic granuloma he presented with would be

Figure 6 Histology picture.

Figure 7 Histology picture.

considered within the range of the giant form. With this finding in mind, it is evident that we cannot exclusively associate giant pyogenic granulomas with individuals having underlying immune conditions or other causes for immunosuppression. The average size of a pyogenic granuloma usually ranges from 0.65 to 1.1 cm,^{7 8} whereas the giant form of pyogenic granuloma exceeds this size. In our case, the size of the pyogenic granuloma was large compared to the average and was not secondary to any known trauma, with a mass increase in size despite the patient being immunocompetent.

Figure 9 Reoccurrence of pyogenic granuloma of the conchal bowl of the right ear 2–3 weeks after excision under local anaesthesia.

Other lesions involving the EAC have been reported as potential causes of conductive hearing loss, including traumatic lesions,⁹ adenoid cystic carcinoma,³ pleomorphic adenoma of the ear canal derived from the ceruminous gland, which caused mild conductive hearing loss,¹⁰ and facial nerve schwannomas presenting as occlusive masses of the EAC.¹¹ This case is unique as it is the first time a pyogenic granuloma of the EAC has been reported as leading to total obstruction of the EAC opening and resultant conductive hearing loss.

Figure 8 Reoccurrence of pyogenic granuloma of the conchal bowl of the right ear 2–3 weeks after excision under local anaesthesia.

Figure 10 Wound granulating and healing with secondary intention after formal excision of pyogenic granuloma under general anaesthesia.

Learning points

- ▶ We believe that pyogenic granuloma should be considered in the differential diagnosis of conductive hearing loss in patients presenting with obstructive lesions along the external auditory canal and its opening.
- ▶ Both cosmetic and functional outcomes need to be considered when treating a lesion of the ear.

Contributors ISR performed the literature search and write up for this case report along with the coauthors.

Competing interests None declared.

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REFERENCES

- 1 Thomas J, Sindhu BR. Pyogenic granuloma at ear piercing site: report of a case. *Indian Dermatol Online J* 2014;5:347–50. (accessed 17 May 2015)
- 2 Shenoy SS, Dinkar AD. Pyogenic granuloma associated with bone loss in an eight year old child: a case report. *J Indian Soc Pedod Prev Dent* 2006;24:201–3.
- 3 Prasad V, Shenoy VS, Rao RA, *et al.* Adenoid cystic carcinoma—a rare differential diagnosis for a mass in the external auditory canal. *J Clin Diagn Res* 2015;9:MD01–2.
- 4 Nthumba PM. Giant pyogenic granuloma of the thigh: a case report. *J Med Case Rep* 2008;2:95.
- 5 Plovanič M, Tsibris HC, Lian CG, *et al.* Giant pyogenic granuloma in a patient with chronic lymphocytic leukemia. *Case Rep Dermatol* 2014;6:227–31.
- 6 Dissemond J, Grabbe S. Giant pyogenic granuloma. *CMAJ* 2008;178:25–6.
- 7 Patrice SJ, Wiss K, Mulliken JB, *et al.* Pyogenic granuloma (lobular capillary hemangioma): a clinicopathologic study of 178 cases. *Pediatr Dermatol* 1991;8:267–76.
- 8 Leyden JJ, Master GH. Oral cavity pyogenic granuloma. *Arch Dermatol* 1973;108:226–8.
- 9 Burchhardt DM, David J, Eckert R, *et al.* Trauma patterns, symptoms, and complications associated with external auditory canal fractures. *Laryngoscope* 2015;125:1579–82.
- 10 Maruyama A, Tokumaru T, Kitamura K, *et al.* Pleomorphic adenoma presenting with conductive hearing loss in the ear canal: a case report and review of the literature. *J Med Case Rep* 2014;8:178.
- 11 Alyono JC, Corrales CE, Gurgel RK, *et al.* Facial nerve schwannomas presenting as occluding external auditory canal masses: a therapeutic dilemma. *Otol Neurotol* 2014;35:1284–9.

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