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Fibroepithelial polyp as an unexpected pathology in the external auditory canal: a case report

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Abstract

Introduction and importance Fibroepithelial polyps are rare benign lesions with uncertain origins. They are commonly found in the skin and genitourinary system. Fibroepithelial polyps in the external auditory canal are infrequent.

Case presentation We report a 60-year-old Persian woman with an incidentally discovered painless fibroepithelial polyp in the right external auditory canal. Microscopic transcanal surgery confirmed the diagnosis after temporal computed tomography imaging showed a soft tissue mass.

Clinical discussion Fibroepithelial polyps have an uncertain etiology and are typically asymptomatic. Surgical resection is the preferred treatment, and the prognosis following resection is generally favorable, with low recurrence rates.

Conclusion This case highlights the rarity of fibroepithelial polyps in the external auditory canal and underscores the importance of considering them in the differential diagnosis of external auditory canal lesions.

Key clinical message

Fibroepithelial polyps are frequent benign lesions of the skin and genitourinary system with mesodermal origins. They occur extremely rarely in the external auditory canal and are usually asymptomatic.

Keywords External auditory canal, Fibroepithelial polyps, Asymptomatic ear mass, Polyps, Auditory canal, Mass

Introduction

Fibroepithelial polyps (FEPs) are frequent benign lesions of the skin and genitourinary system that have mesodermal origins [1]. Congenital, traumatic, and viral causes have been proposed, and their pathogenesis is thought to be an underlying chronic inflammatory process [2].

External auditory canal (EAC) lesions, in particular, are uncommon in the head and neck. Three cases involving the external auditory system have been recorded thus far, two of which involved acute ear discomfort and one of which involved sensorineural hearing loss in the middle ear [3–6].

Therefore, we present a case of a 60-year-old woman with an inadvertently discovered asymptomatic fibroepithelial polyp in an external auditory canal. She underwent

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microscopic transcanal surgery to remove her lesion, and the procedure went smoothly.

The work has been reported in line with the Surgical CAse REport (SCARE) criteria [7].

Case presentation

A 60-year-old Persian woman was referred to our otology clinic with complaint of right-sided external auditory canal painless lesion. The patient stated the lesion was found incidentally, and she denied any history of aural fullness, vertigo, tinnitus, pain, or otorrhea. She did not mention any diseases or drug administration in her medical history. On otoscopic examination, a round solitary lesion was detected in the right external auditory canal covered with normal skin without any ulcer, discoloring, or bleeding on touching. Moreover, no connection between mass and the tympanic membrane was observed. After examination, temporal computed tomography (CT) was requested and a soft tissue mass outside the tympanic membrane was shown, with no evidence of bony erosion. The middle ear cavity and the ossicles were looked normal. Additionally, no middle ear lesions were observed (Fig. 1). The patient underwent microscopic transcanal resection of the lesion under general anesthesia. The excised mass was sent to the pathologist, and the pathologic examination result was compatible with fibroepithelial polyp (Fig. 2). Postoperative course was uneventful. Furthermore, no evidence of mass recurrence was observed during 6-month clinical follow-ups.

Discussion

Fibroepithelial polyps are benign lesions, and their origin is uncertain. Congenital, hormonal imbalances, carcinogens, chronic irritation from trauma and infection, and subsequent inflammation and hyperplasia to regional lesions are some of the causes that have been suggested. These tumors, also known as fibromas, are of mesodermal origin and only occasionally develop into malignant tumors [3–5]. Because it was discovered accidentally, the original cause in our patient is unknown. We presumed that persistent inflammation and hyperplasia may be the cause. We might speculate that hormone imbalances are

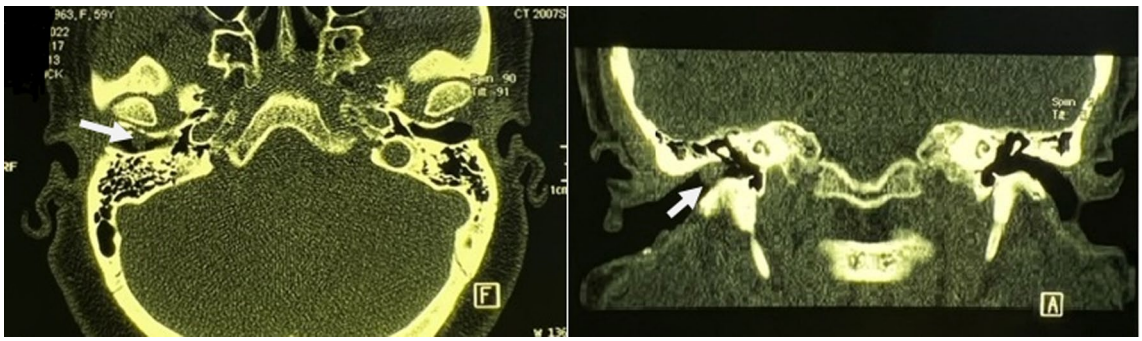

Fig. 1 Computed tomography scan in axial and coronal views demonstrating an external auditory canal soft tissue mass, with no involvement of the tympanic membrane and no bone erosion (arrows)

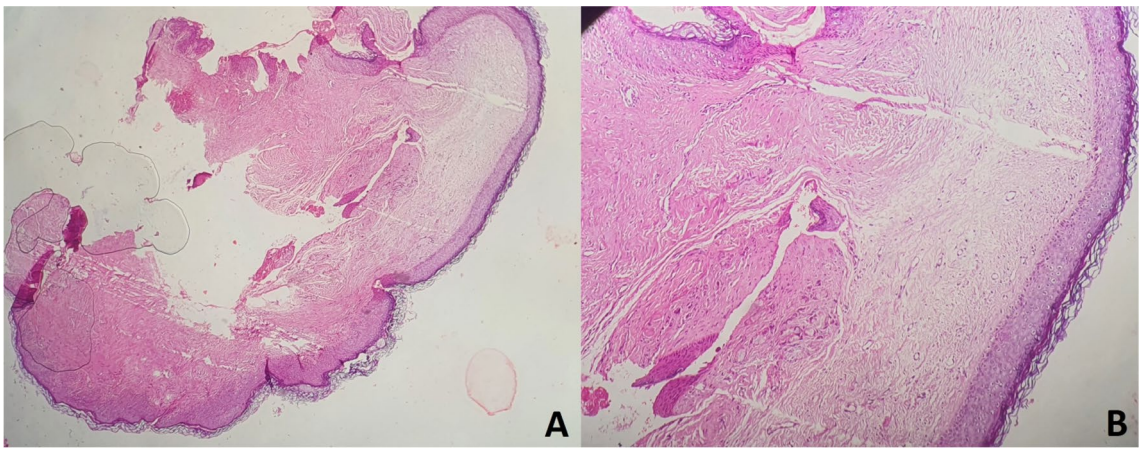

Fig. 2 Sections show polypoid lesion composed of fibrocollagenous stroma lined by stratified keratinized squamouse epithelium. Hypocellular area with degree of stromal edema are also evident. No evidence of dysplasia or koilocytic change was identified. **A** × 40 **B** × 100

to blame because all recorded cases, including ours, are of female patients [3–6].

As in our case, these lesions are typically asymptomatic. However, depending on their location, they may cause symptoms such as sensorineural hearing loss [3], frequent epistaxis and nasal obstruction [8], and a sensation of a foreign mass in the throat [9].

Although not present in our patient, hearing loss, otalgia, otorrhea, tinnitus, ear fullness, and vertigo symptoms can occur if mass lesions narrow or occlude the EAC [10].

Exostosis, osteoma, fibrous dysplasia, granuloma, ceruminous gland tumor, cholesteatoma, mycobacterial infection, papilloma, retained tympanostomy tubes, Langerhans cell histiocytosis, malignancies, and other conditions are among the differential diagnoses based on the macroscopic appearance and location of the lesion [5]. A definitive diagnosis can only be made after histopathological analysis.

Fibroepithelial polyps in histopathology show a fibrovascular core encased in stratified squamous epithelium. Mast cells and stromal cells interact to promote cellular and vascular differentiation. Desmin and vimentin exhibit strong immunohistochemical positivity [4, 5].

The fibroepithelial polyp was the final diagnosis in this case, as determined by pathology, macroscopic appearance, and normal skin appearance.

Resections, as in the other four cases that have been documented, were the most effective treatment for this type of lesion for both diagnostic and therapeutic objectives. After temporal CT revealed no evidence of bone erosion, we performed transcanal resection. A temporal CT scan is advised for a precise site assessment and evaluation of lesion's spread [3, 5].

The prognosis for our patient was good, and the likelihood of malignancy is low based on microscopic and macroscopic analysis. Recurrence following resection is uncommon [5].

Conclusion

As a result, we describe a rare instance in which a 60-year-old woman had a FEP discovered in the cartilaginous portion of her EAC. Utilizing temporal CT scan and histology, we validated the diagnosis. The polyp was successfully removed utilizing a transcanal technique, and the healing process went smoothly. Even though FEP is a very uncommon diagnosis, an EAC polyp should be included in the differential diagnosis.

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None.

Author contributions
BB, MA, FJ: Study concept and design. MA, FJ: Acquisition of data. FJ, DN: Drafting of the manuscript. FJ, MP: Critical revision of the manuscript for important intellectual content. BB, MA: Study supervision. All authors read and approved the final manuscript.

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Availability of data and materials
Data and materials from this study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate
Ethical approval for this study was approved by the Ethical Committee of Shahid Beheshti University of Medical Sciences on February 2022. The present study complies with ethical and research standards involving humans. This article does not contain any studies involving animals performed by any of the authors.

Consent for publication
Written informed consent as obtained from the patient for publication of this case report and the accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests
There is no conflict of interest to declare.

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