Introduction

Fibroepithelial polyp (FEP), also known as fibroma or acrochordon, is a benign lesion of mesodermal origin, is frequently noticed in the skin with the reported incidence of 40% among the general population. In oto-otolaryngology, FEP is commonly found in the skin of neck, trunk, and face. In addition to skin, the fibroepithelial polyp may arise anywhere on mucosa. Independent cases of mucosal origin in the head and neck region were reported from tongue, oropharynx, inferior nasal turbinate, and tonsil.

Fibroepithelial polyp of external auditory canal (EAC) origin is extremely rare. In 1993, A. G. Toma and E.W. Fisher published the first documented case of fibroepithelial polyp associated with ostoma in the external auditory canal. The independent origin of FEP in the external auditory canal was first reported by Tanaka et al. in 2013. After him, two more such FEP cases were reported by Thomas et al. in 2017 and Formanek et al. in 2020. To the best of our knowledge, we report the fourth case of fibroepithelial polyp arising independently in the EAC of a 12-year-old male child.

Case Report

A 12-year-old male child presented to the private consultation chamber of the author with the complaints of swelling and blockage sensation in the left ear for 5 years, hearing impairment for 1 year and otorhoea associated with pain for 10 days. Initially it was an asymptomatic small lesion which was incidentally noticed by the parent. They visited several ENT consultants, but none advised surgical treatment. He had no history of tinnitus or vertigo. On physical examination, a mass was noticed in the EAC covered with purulent discharge. After suction clearance, otoendoscopy revealed the grape-like multiple swellings with the surface ulceration in an area. It occluded the whole EAC and its attachment could not be identified. Tuning Fork test showed Rinne negative in the left ear and Weber lateralized to same side correlated with conductive hearing loss. The rest of the ENT examination found no abnormality. Pure tone audiogram revealed 38.75dB ABG (air-bone gap) in 500,1000,2000 and 4000 Hz in the left ear. Computed tomography (CT) demonstrated a well-circumscribed calcified lesion having eccentric small soft tissue component in the left external auditory canal. The soft tissue density between the lesion and the tympanic membrane may be granulation tissue or desquamated keratin.

Fig-1: Otoendoscopy showed a grape-like multiple swellings with the surface ulceration in an area in the left EAC (a), CT scan (axial and coronal) demonstrated a well-circumscribed calcified lesion having eccentric small soft tissue component in the left external auditory canal (b & c).

The lesion was excised completely with a standard post auricular approach under general anesthesia on 19-08-2018. Per-operative finding showed that the mass was attached at the junction of inferio r and posterior wall, single in number with multiple surface projections. Some surface area had superficial ulceration. After removal of mass, desquamated keratinous debris was found in the external auditory canal which was packed out. The tympanic membrane and remaining EAC revealed normal. A bony erosion and uneven bony projection were noticed near the attachment of the lesion. Canaloplasty was done and bony gap was filled with pieces of conchal cartilage. The postoperative course was uneventful.

Fig-2: Per-operative finding showed a single mass with multiple surface projections. Some surface area had superficial ulceration (a & b).

Macroscopically the tumour was solid, hard, and grey-white in colour, partly covered with mucosa. It measured 2.0X1.4X1.0 cm. The microscopic image of the polyp showed a polypoid growth with central fibrous core covered with stratified squamous epithelium and underlying core of fibrocellular tissue. Some area showed small chips of woven bone with fibrous tissue and ulcerated surface line by granulation tissue. These findings suggested a diagnosis of fibroepithelial polyp.

Fig-3: Aural polyp lined by stratified squamous epithelium. The core shows fibrous tissue (H&E, x120) (a). The core shows fibrous tissue a small chip of woven bone (H&E, x220) (b). Aural polyp showing ulcerated surface line by granulation tissue. The core shows fibrous tissue (H&E, x220) (c).

The EAC healed completely within one month. The child had got relief of pain, otorhoea and blockage sensation of ear. He also noticed hearing improvement. The follow-up pure tone audiogram after 33 months showed 16.25dB ABG (air-bone gap) in 500,1000,2000 and 4000 Hz with 22.5 dB gain or improvement.

The child's parent was advised to visit for regular follow-up, but his parents didn’t follow it. The author called the parents to bring the child for recording follow-up findings. Then the recurrence in the resected area was noticed after 33 months of follow-up. There were smooth surfaced, multiple swelling in the previous site without any symptom. He had been advised for revision surgery to avoid increasing the size of it, and to produce significant symptoms.

Discussion

Fibroepithelial polyp arising from EAC is a rare presentation with unknown aetiology. Multiple factors including chronic inflammatory process, chronic irritation from trauma or infection, carcinogenic hormonal imbalances, Human papilloma virus are thought to facilitate the development of FEP. In the current case, no aetiological factor is identified. Though there is no age or sex predilection, all four previous cases were male children.

Fig-4: Completely healed operated area of the external auditory canal after 3 months (a). Recurrent multiple swelling at the previous operated site after 33 months (b).

Fibroepithelial polyp arising from EAC is a rare presentation with unknown aetiology. Multiple factors including chronic inflammatory process, chronic irritation from trauma or infection, carcinogenic hormonal imbalances, Human papilloma virus are thought to facilitate the development of FEP. Though very rare, malignant transformation of fibroepithelial polyp has been reported. It is extremely rare. As the differentiation of FEP from others tumour-like lesions in the EAC is clinically quite difficult, it also should be considered as a rare differential diagnosis along with them. Surgical excision and histopathological confirmation are the management of choice even it is asymptomatic. Though FEP in EAC is benign in nature, long term follow-up is recommended to detect late recurrence.

Conclusion

Fibroepithelial polyp arising independently in the external auditory canal (EAC) is extremely rare. As the differentiation of FEP from others tumour-like lesions in the EAC is clinically quite difficult, it also should be considered as a rare differential diagnosis along with them. Surgical excision and histopathological confirmation are the management of choice even it is asymptomatic. Though FEP in EAC is benign in nature, long term follow-up is recommended to detect late recurrence.

References

3. In Otolaryngology, FEP is commonly found in the skin of neck, trunk and face.