



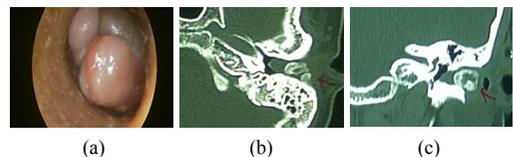
**Introduction**

Fibroepithelial polyp (FEP), also known as fibroma or acrochordon, a benign lesion of mesodermal origin, is frequently noticed in the skin with the reported incidence of 46% among the general population<sup>1</sup>. In Otolaryngology, FEP is commonly found in the skin of neck, trunk and face<sup>2</sup>. 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<sup>3</sup>, oropharynx<sup>3</sup>, inferior nasal turbinate<sup>4</sup>, tonsil<sup>5</sup>.

Fibroepithelial polyp of external auditory canal (EAC) origin is extremely rare<sup>6</sup>. In 1993, A. G. Toma and E.W.Fisher published the first documented case of fibroepithelial polyp associated with osteoma in the external auditory canal<sup>7</sup>. The independent origin of FEP in the external auditory canal was first reported by Tanaka et al in 2013<sup>8</sup>. After him, two more such FEP cases were reported by Thomas et al in 2017<sup>9</sup> and Formanek et al in 2020<sup>10</sup>. To the best of our knowledge, we report this fourth case of Fibroepithelial polyp (FEP) 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 otorrhoea 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 observed in the EAC covered with purulent discharge. After suction clearance, otoscopy 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 debris.



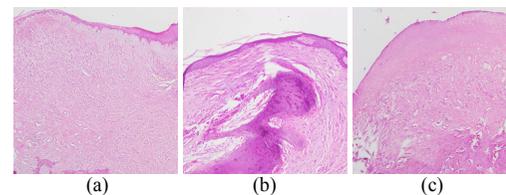
**Fig-1: Otoendoscopy showed a grape-like multiple swellings with the surface ulceration in an area in the left EAC (a), CT scan (axial and coronal) demonstrated a well circumscribed calcified lesion having eccentric small soft tissue component in the left EAC (b & c).**

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 inferior 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 sucked 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 examination showed a polypoidal tissue covered with stratified squamous epithelium and underlying core of fibrous tissue. Some area showed small chips of woven bone with fibrous tissue and ulcerated surface lined by granulation tissue. These findings suggested a diagnosis of fibroepithelial polyp.

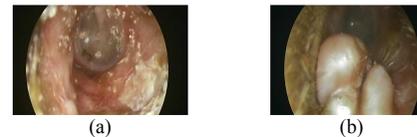


**Fig-3: Aural polyp lined by stratified squamous epithelium. The core shows fibrous tissue (H&E, x120) (a). The core shows fibrous tissue a small chip of woven bone (H&E, x220) (b). Aural polyp showing ulcerated surface lined by granulation tissue. The core shows fibrous tissue (H&E, x220) (c).**

The EAC healed completely within one month. The child had got relief of pain, otorrhoea 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.



**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)**

**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, carcinogens, hormonal imbalances, Human papilloma virus are thought to facilitate the development of FEP<sup>1,6,10</sup>. In the current case, no aetiological factor is identified. Though there is no age or sex predilection, all four previously reported cases of FEP in the EAC were female. But the current case is a male child. Mass lesions in the ear canal partially or completely blocking the EAC cause aural symptoms such as ear fullness, hearing impairment, tinnitus, otitis externa with resultant otorrhoea and otalgia. Like most of the benign lesions in the EAC, fibroepithelial polyp may be asymptomatic and incidentally noticed until it occludes the canal or produces symptoms<sup>6,10</sup>. Out of four previous cases, one was asymptomatic<sup>10</sup> and other three had noticeable symptoms. In this case, the polyp completely occluded the canal with surface ulceration, and the presenting symptoms were otorrhoea, otalgia, aural fullness, and hearing impairment. As EAC lesions are usually benign in nature, and if the clinical findings do not show any suspicion of malignancy, biopsy before surgical excision may be unnecessary. CT scan and MRI can help delineate the extension and type of lesion, and status of remaining invisible part of EAC and middle ear and mastoid. In the current case, CT scan demonstrated the extension of lesion and status of the remaining EAC and middle ear. Tanaka et al<sup>8</sup> proposed the confirmation of non-malignancy of the lesion before definite treatment plan. The polyp of EAC was excised completely through planned surgery, and histopathology confirmed fibroepithelial polyp in this case.

Generally, tumour like mass lesions including osteoma, exostoses, granulation tissue, granuloma, papilloma, epidermal cyst, ceruminous gland tumour, fibrous dysplasia, malignancies etc. in the external auditory canal are clinically described as aural polyp. In addition to these, fibroepithelial polyp also should be included as a rare differential diagnosis<sup>9</sup>. Though very rare, malignant transformation of fibroepithelial polyp has been reported<sup>11</sup>. So, even it is asymptomatic, excision and histopathological confirmation must be ensured. No recurrence was reported in previous three cases where 12 months was the longest follow-up period. The current case demonstrated the recurrence after 33 months of follow-up. So, though benign in nature, long term follow-up is recommended to detect late recurrence in unpredictable cases.

**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**

1. Quamruzzaman M, Das KK, Khondoker MS. Fibroepithelial polyp/skin tag – unusual presentation - A Case Report. Bangladesh Journal of Plastic Surgery 2010;1(1):33-35.
2. Lloyd S, Lloyd J, Dhillon R. Chondroid metaplasia in a fibroepithelial polyp of the tongue. J Laryngol Otol. 2001;115(8):681-82.
3. W. Mangar, D. Jiang, and R. V. Lloyd. Acute presentation of a fibroepithelial pharyngeal polyp, Journal of Laryngology and Otolaryngology 2004;118(9):727-729.
4. A. Perić, S. Matković-Jozin, and B. Vukomanović-Durdević. Fibroepithelial polyp arising from the inferior nasal turbinate. Journal of Postgraduate Medicine 2009; 55(4): 288-289.
5. A. Farhoud, A. Trinidad, M. Harris, and A. Pfeleiderer. Fibroepithelial polyp of the tonsil: case report of a rare, benign tonsillar lesion. Journal of Laryngology and Otolaryngology 2010;124(1),111-112.
6. Kim JR, Im H, Chae SW, Song JJ. Clinical Features of Benign Tumors of the External Auditory Canal According to Pathology. Ann Otolaryngol Rhinol 2017; 4(3): 1169.
7. A. G. Toma and E. W. Fisher. Osteoma of the external auditory meatus presenting as an aural polyp. Journal of Laryngology and Otolaryngology 1993;107(10): 935-936.
8. Tanaka N, Matsunobu T, Shiotani A. Fibroepithelial polyp of the external auditory canal: a case report and a literature review. Case Rep Otolaryngol 2013.
9. Thomas P, Rai P, Meena R. Fibroepithelial polyp of external auditory canal. Eur Ann Otorhinolaryngol Head Neck Dis 2017; 134(2):141-142.
10. Formanek M, Zelenik K, Zidlik V, Kominek P. Fibroepithelial Polyp of the External Auditory Canal in a 2-Year-Old Child. Ear, Nose & Throat Journal 2020.
11. Eads TJ, Chuang TY, Fabre VC, Farmer ER, Hood AF. The utility of submitting fibroepithelial polyps for histological examination. Arch Dermatol 1996;132(12):1459-62.

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