

Capillary Hemangioma in the External Auditory Canal

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ABSTRACT Hemangiomas are common tumours encountered in infancy. Majority of the hemangiomas present in the head and neck region but rarely reported in the ear. We report a case of capillary hemangioma manifesting as an external auditory canal mass.

Key words: Hemangiomas, Capillary

Introduction

Hemangiomas are benign vascular lesions that are most commonly encountered in infancy and childhood. They are relatively common in the head and neck region but rarely reported in the ear. 40% of the Haemangiomas of the external ear arise from the lamina propria of the tympanic membrane and is pedicled in the posterior part. In 40% of cases, hemangiomas involve both the external auditory canal and tympanic membrane. In 20% of cases it usually involves only the skin of the posterosuperior wall of external auditory canal.

Case Report

A 60 year old male presented with a 2month history of blocking sensation and diminished hearing in the right ear and 3days history of right ear pain. On examination a pink pedunculated mass was visualized completely occluding the external auditory canal which was soft, bled on touch, could be probed all around the mass except in the posterosuperior aspect. Tuning fork test revealed conductive hearing loss on the right side. Pure tone audiogram revealed 30 dB conductive hearing loss on right side. CT temporal bone(plain) revealed a homogenous soft tissue mass in the external auditory canal without any bony erosion and an intact tympanic membrane and ossicles.

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Figure 1: CT temporal bone (plain)

Operative procedure

The mass was found to be arising from the skin of external auditory canal in the posterosuperior aspect and was completely excised with clear surgical margins via the transcanal approach and was sent for histopathological examination. Histopathology revealed the tumour to be composed of dilated vascular channels and endothelial cells arranged in clusters and nodules with areas of fibrinoid necrosis which are characteristic of **Capillary Haemangioma**.

Histopathology



Figure 2: (10X magnification) Tumour shows squamous epithelium lining and composed of dilated blood vessels and endothelial cells with slit like lumen. Endothelial cells are arranged in clusters and nodules

DISCUSSION

Freedman (in 1972) was the first to report the presence of hemangioma in the external auditory canal, he

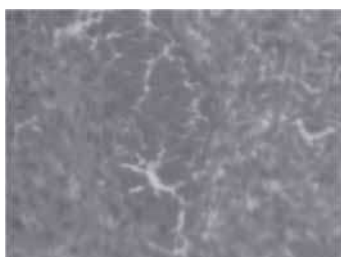


Figure 3 : (40X magnification) :shows dilated vascular channels lined by endothelial cells

described two male patients in their 60's with lesion that started from the posterior wall of the external auditory canal affecting the tympanic membrane, since then very few cases have been reported. In 1987, Hawk and van Nostrand described the first case of hemangioma of external auditory canal with no involvement of the tympanic membrane, and up to now 3 such cases have been reported.[3]

Haemangiomas are the most common tumours of infancy and childhood, with more than 60% of all haemangiomas occurring in the head and neck region. Complete resolution occurs in 50% of cases by 5 years of age; 70% by 7 years of age, with the remaining 30% resolving to varying degrees over time[1].

Hemangiomas are characterized by increased numbers of normal or abnormal blood vessels[9]. The natural history is characterised by rapid proliferation followed by a slow period of spontaneous involution. Growth during the **proliferative phase** is embodied by endothelial hyperplasia and an increase in the number of mast cells. During the **involution phase**, endothelial cell activity decreases with normalisation of mast cell count and infiltration of the cellular parenchyma by fibrofatty tissue[1]. There may be difficulty in histologically distinguishing it from vascular tumours. Malignant transformation is rare. There are several histologic and clinical variants. The most common variant, capillary hemangiomas, occur in the skin, subcutaneous tissue and mucous membranes of oral cavities and lips as well as in the liver, spleen and kidneys[9].

But the hemangioma of the tympanic membrane and/or the external auditory canal occur predominantly in adulthood (average age 56), with a predilection for the male sex (M:F, 2:1). 40% of external auditory hemangiomas, arise from the lamina propria of the tympanic membrane and is pedicled in the posterior part of the tympanic membrane. The hemangioma may affect the external auditory canal involving only the skin of the posterosuperior wall (20% of cases). It can sometimes involve both the external auditory canal and tympanic membrane (40% of cases)[7].

Temporal bone hemangiomas tend to arise from the geniculate ganglion, internal auditory canal and beginning of chorda tympani due to their vascularity[5]. Typically, the ear hemangiomas do not have bone invasion properties [7]. Treatment of these lesions is by complete excision with clear surgical margins. Different approaches can be considered according to the location of the lesion. Small lesions can be removed by transcanal approach, whereas transmastoid, translabyrinthine, middle fossa approach or combined methods must be considered for advanced lesions[7].

CONCLUSION

This is a rare case presentation of capillary hemangioma occurring in the external auditory canal. Hemangiomas should be differentiated from other vascular lesions like glomus jugulare, high jugular bulb, aberrant internal carotid artery and other arteriovenous malformations. Extent of the lesion should be evaluated radiologically and managed by clear surgical excision and confirmed by histopathological examination.

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