

## Malignant melanoma of the ear canal presenting as wart

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**Abstract:** Malignant melanoma is a rare malignancy of the external auditory canal. The vast majority of them occur in the areas of the body that are exposed to the sun. Early histological examination may possibly favor better prognosis. We report a case of a 38-year-old female who presented with a small mass in right ear canal, earache and minimum discharge since 4 months. Initially scraping was done in the ENT clinic. Subsequently she had a wide excision done by the end aural approach at a different hospital. A year later the patient presented with a swelling involving the ear canal which extended to the helix and supratemporal region with the histology report as malignant melanoma. A literature review of the disease, radiological findings, immunohistochemical features and treatment options are discussed.

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*Key words:* ear canal, malignant melanoma, wart

### Introduction

Malignant melanoma is a malignant neoplasm originating from the melanocytes which are responsible for skin pigmentation. About 15-25% of the melanomas occur in the head and neck region<sup>1</sup>; approximately 80% are seen in areas exposed to the sun. The majority of those seen in non-exposed mucosal areas are of ocular origin and some are seen in the sinuses, nose, oral cavity and larynx<sup>1</sup>. However, this tumor is rarely reported in the external auditory canal<sup>2,3,4</sup>. Lesions in the non-exposed areas have a higher incidence in the dark skinned races<sup>3</sup>. We discuss an unusual case of a 38-year-old female patient who presented with a wart-like lesion in the external auditory canal and minimum discharge which was diagnosed as malignant melanoma. This report aims to increase awareness amongst clinicians to consider malignant melanoma as a differential diagnosis of cases

presenting with small granular wart in the external auditory canal.

### CASE REPORT

A 38-year-old female, presented with a progressively enlarging mass at her right ear canal causing earache and minimal discharge of 4 months' duration. On examination, the external auditory canal was narrowed by a small wart-like swelling at the superior wall of the cartilaginous part of the external auditory canal. The tympanic membrane was normal. The lesion was scraped in the clinic and the canal was packed with a wick of antibiotics and steroid cream. She defaulted and later presented with recurrence of the larger granular wart-like growth in the external auditory canal to the ENT department in another hospital. Subsequently she had wide excision done by the end aural approach.

A year later the patient presented with a swelling in the external auditory canal, extending over the helix and to the supratemporal region (Fig 1). Computed Tomography (CT) scan revealed a mass involving the cartilaginous portion of the right external auditory canal (EAC) and extending to the ipsilateral parotid gland. Few enhancing lymph nodes were noted in the ipsilateral parotid region. The histopathology report of the earlier lesion was traced and it revealed malignant melanoma. Microscopic examination showed features of nodular malignant melanoma with infiltration of malignant cells arranged in a sheet and lobulated pattern exhibiting mildly large, pleomorphic nuclei and prominent nucleoli with melanin pigment in the cytoplasm. Immunohistochemical staining showed malignant cells positive for S100, HMB45 and partially for NSE. It was negative for CK. The patient was referred to a higher centre for further management; however she refused treatment and opted for alternative treatment.

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**Fig. 1:** Mass involving right external auditory canal, helix of the pinna and supratemporal region

### Discussion

Malignant melanoma is a rare malignant tumour in the external auditory canal. It is a known fact that sunlight exposure is a precursor for the development of melanomas due to increase in the melanocyte size and functional activity<sup>3</sup>. Melanin is synthesised and stored in melanosomes of the stratum germinativum and stratum spinosum. Males appear to have a higher incidence of melanoma compared to females. The highest concentration of melanocytes is in the facial and male genital region and the lowest in the trunks. Although malignant melanomas of the ear comprise approximately 10% of all head and neck melanomas, the melanomas of the ear canal are rare<sup>1,5</sup>.

Malignant melanoma should be considered in a patient presenting with wart-like lesion and discharge in the external auditory canal. As in our case, an advanced disease may present with swelling extending to the pinna and supra mastoid region. Extension and involvement of the parotid gland and lymph nodes may be revealed in CT scan. The thickness of the lesion and nodal metastasis might affect the overall prognosis. Byers *et al.* (1980) concluded from a review of 102 cases that survival was correlated with the sex, clinical appearance of the lesion, anatomical site of origin, microscopic thickness, and level of invasion, nodal metastasis and the definitive surgical treatment<sup>1</sup>. Based on a series of 162 cases with stage I/II melanoma, Jahn *et al.* (2006)

concluded that tumour thickness and Clark's level of the invasion were important in the overall survival of the patient<sup>6</sup>. Sentinel lymph node biopsy did not have an impact in the prognosis<sup>6</sup>. The anatomical and lymphatic characteristics of the ear require special consideration which is important in the treatment of melanomas. Although, complete surgical excision offers the best option for cure, extension to the adjacent structures like temporal bone, supra mastoid and parotid may warrant an aggressive approach with complete resection and reconstruction of the auditory canal. Palliation in the form of adjuvant chemotherapy, external beam radiotherapy may be required in advanced cases.

### Conclusion

Malignant melanoma is an unusual clinical entity arising in the external auditory canal. In patients presenting with a granular wart-like lesion and bloodstained discharge, it should be considered in the differential diagnosis. A high index of suspicion should be raised in any pigmented lesion which changes color, enlarges rapidly or ulcerates with poor healing. A biopsy is recommended in any wart-like granular lesion in the ear canal. Initial histopathology result with close follow-up may prevent poor surgical outcome and prognosis.

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