

CASE REPORT

SQUAMOUS CELL CARCINOMA OF INNER 1/3rd OF EXTERNAL AUDITORY CANAL – A RARE CASE REPORT

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ABSTRACT: Squamous cell carcinoma of external auditory canal (EAC) is a rare tumour, which commonly occurs in the auricle, whereas inner 1/3rd of external auditory canal is a rare site for this tumour. We are presenting a case of 41 year old female patient presented with only 3 months history of otorrhoea. On examination she had pinkish mass occluding the complete external auditory canal (EAC) of right ear involving all the walls of external auditory canal and was friable with bleeding on touch. Histological examination showed Large cell non keratinizing squamous cell carcinoma. CT scan showed tumour in the inner 1/3rd of EAC without temporal bone and middle ear involvement. She underwent a total surgical excision of the tumour with tumour free margins. Advised radiotherapy and follow up.

KEYWORDS: Squamous cell carcinoma, Inner 1/3rd of external auditory canal.

INTRODUCTION: Tumours in the ear are unusual. In the external ear, most of the neoplasms are those of the covering skin. Only the ceruminous glands are peculiar to the external ear, but ceruminous tumours are rare. The underlying bone contributes some swellings and neoplasms to this area.¹ The skin of the ear canal is 0.5 to 1 mm thick in the cartilagenous part, but only 0.2 mm thick in the bony part of the external ear canal. Lesions of the bony canal therefore have greater propensity to invade the bone.^{2,3} Squamous cell carcinoma of external auditory canal is more common in elderly population, known patients of chronic suppurative otitis media and patients exposure to radiation. We are presenting our case in view of middle age presentation, short history of symptoms and no history of CSOM / radiation exposure.

CASE DETAILS: A 41 year old female presented with history of right ear pain and thin bloody discharge and reduced hearing of right ear compared to left ear since 3 months. No history of tinnitus, vertigo and facial weakness. There was no history of chronic suppurative otitis media, tobacco use, family history of cancer and exposure to radiation.

On examination there was a pinkish mass (Fig. 1) occluding the complete external auditory canal (EAC) involving all the walls of external auditory canal and was friable with bleeding on touch. She had moderate conductive hearing loss without any cranial nerve weakness or loss of sensation. Biopsy taken from mass and sent for histopathological examination.

Microscopic examination revealed invasive large cell non keratinizing squamous cell carcinoma with marked nuclear atypia.

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Preoperative CT scan showed heterogeneously enhancing soft tissue density mass of 18x8x5 mm present in inner 1/3rd of external Auditory canal without bony erosions. Middle and Inner ears are normal.

Ultra sound abdomen and chest x-ray were normal. Biochemistry and hematological parameters were normal. There was no evidence of any lymphnode metastasis.

Our patient belongs to Stage I/IV (T1, N0, M0) of AJCC staging⁴ and also according to modified university of pittsburg staging. Where T1 in AJCC is tumour is 2 cm or less in greatest dimension with less than two high-risk features. High-risk features for the primary tumor (T) staging are:

- 1) Depth/invasion: >2 mm thickness, Clark level \geq IV Perineural invasion.
- 2) Anatomic location: Primary site of ear and Primary site of non-hair-bearing lip
- 3) Poorly differentiated or undifferentiated tumour.

Since the lesion is limited to inner 1/3rd of skin in external auditory canal without any bony erosions, surgery followed by radiotherapy was advised. An encircling incision was given with Sleeve resection of external auditory canal (Fig-2) along with mucoperiosteum was done. Temporal bone, internal carotid artery, facial nerve, IX, X, XI and XII cranial nerves and ear lobe were preserved. On post-operative follow up, audiogram showed 20 db loss of hearing.

DISCUSSION: External auditory canal squamous cell carcinoma is a disease of elderly people. These tumours are more common in the auricle than in the canal.⁵ A serious problem with the canal lesions is the delay in diagnosis because of the minimal symptoms that may be present. Pain, hearing loss and drainage of blood or pus are the main features in that group. A plaque-like or even polypoid mass may be felt or even seen.¹ Grossly and microscopically, they do not differ significantly from those tumours seen elsewhere in sun-exposed skin.⁵

Strong clinical suspicion and Biopsy followed by CT scan is needed for diagnosis and evaluation of tumour extent and also to know the status of temporal bone involvement. Inview of rare occurrence of tumour in the inner 1/3rd of external auditory canal and thin interface between skin and underlying bone at site leads to invasion of tumour in to the temporal bone, if there is delay in the diagnosis. Invasion of bone leads to increases T stage, while staging of this disease.

On review of literature, Rammohan Tiwar et al⁶ followed Stell's classification of Carcinoma of the external auditory meatus and middle ear by Stell PM et al (1985)⁷ and Yadav et al⁸ followed University of Pittsburg staging method proposed by Arriaga M et al(1990).⁹ Randal L Breau et al¹⁰ proposed a modification of university of Pittsburg classification of early stage lesions based on their retrospective study. This classification emphasizes more on the site of the lesion in the canal and less on the size of primary tumour or degree of bony invasion. Our case belongs to T1 in all the above staging systems.

Combination therapy with surgery and radiotherapy provided a higher survival rate than surgery or radiotherapy alone. Based on the staging of disease at presentation, lateral temporal bone resection or total temporal bone resection is recommended with adjuvant radiotherapy.

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CONCLUSION: Squamous cell carcinoma of inner 1/3rd of external auditory canal is a very rare tumour and thin intervening stroma between skin and underlying bone leads to early invasion of the bone. A strong clinical suspicion with early biopsy and CT scan may diagnose the lesions at an early stage like in our case.



Fig. 1: Pinkish polypoidal friable mass in the Right external auditory canal



Fig. 2: Sleeve resection of tumour

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