

Pathology in Focus

Eccrine cylindroma of the ear canal – report of a case

H. S. SHARMA, M.S.*; M. Z. MEORKAMAL, D.C.P.†; H. ZAINOL, D.C.P.†; A. S. DHARAP, M.S.‡

Abstract

Eccrine cylindroma is a benign tumour arising from sweat glands in the skin. It favours the face, forehead and scalp involving the turban area and hence is called a turban tumour. Amongst a variety of tumours originating from adnexal skin structures, which may appear in the ear canal, eccrine cylindroma forms a very rare entity. We present such a case and discuss its pathological and clinical features.

Key words: Cylindroma; Ear canal; Ear, external

Introduction

A 61-year-old Malay woman first presented to the ENT outpatient clinic with a seven-year history of a painless, slowly enlarging, mass in her left external auditory meatus. For the past five months there was also a dull pain in her left ear. She was found to have a 2.5 × 2 × 2 cm firm mass with a granular sur-

face, attached to the concha and tragus anteriorly and extending medially into the external auditory meatus (Figure 1). The overlying skin was intact and was reddish in colour. Otoscopic examination, done through the crescentic slit between the mass and the roof of the external auditory meatus, showed a normal tympanic membrane. The remainder of the otological examination

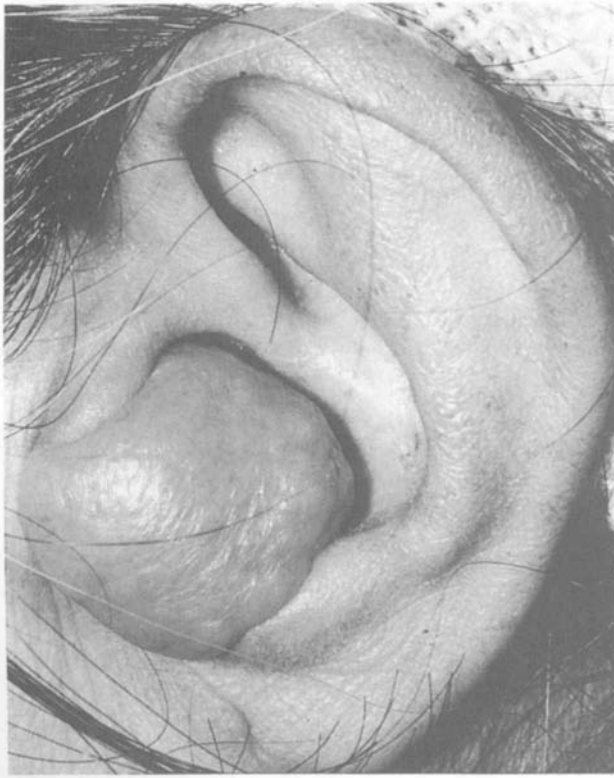


FIG. 1

Photograph showing the tumour before operation.

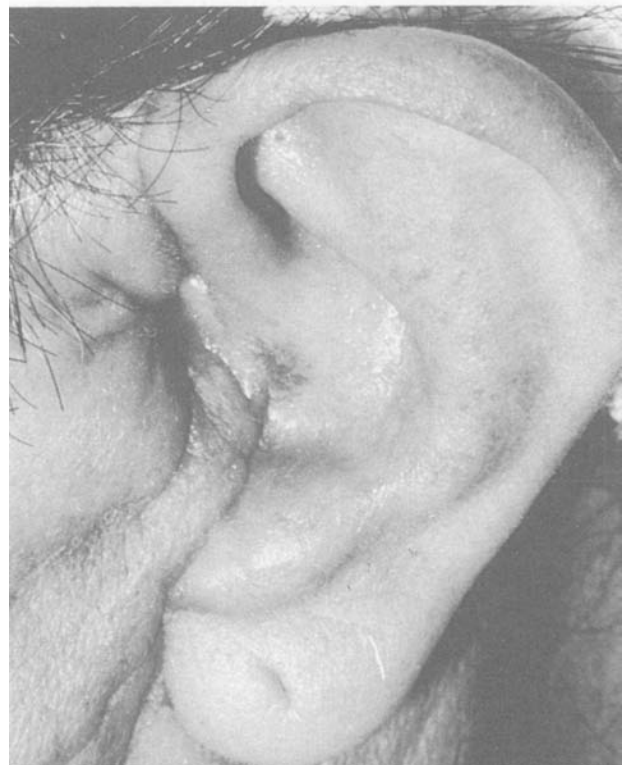


FIG. 2

Photograph of the same patient at subsequent follow up.

From the Departments of Otorhinolaryngology*, Pathology†, and Anatomy‡, School of Medical Sciences, University Sains Malaysia.
Accepted for publication: 11 February 1994.

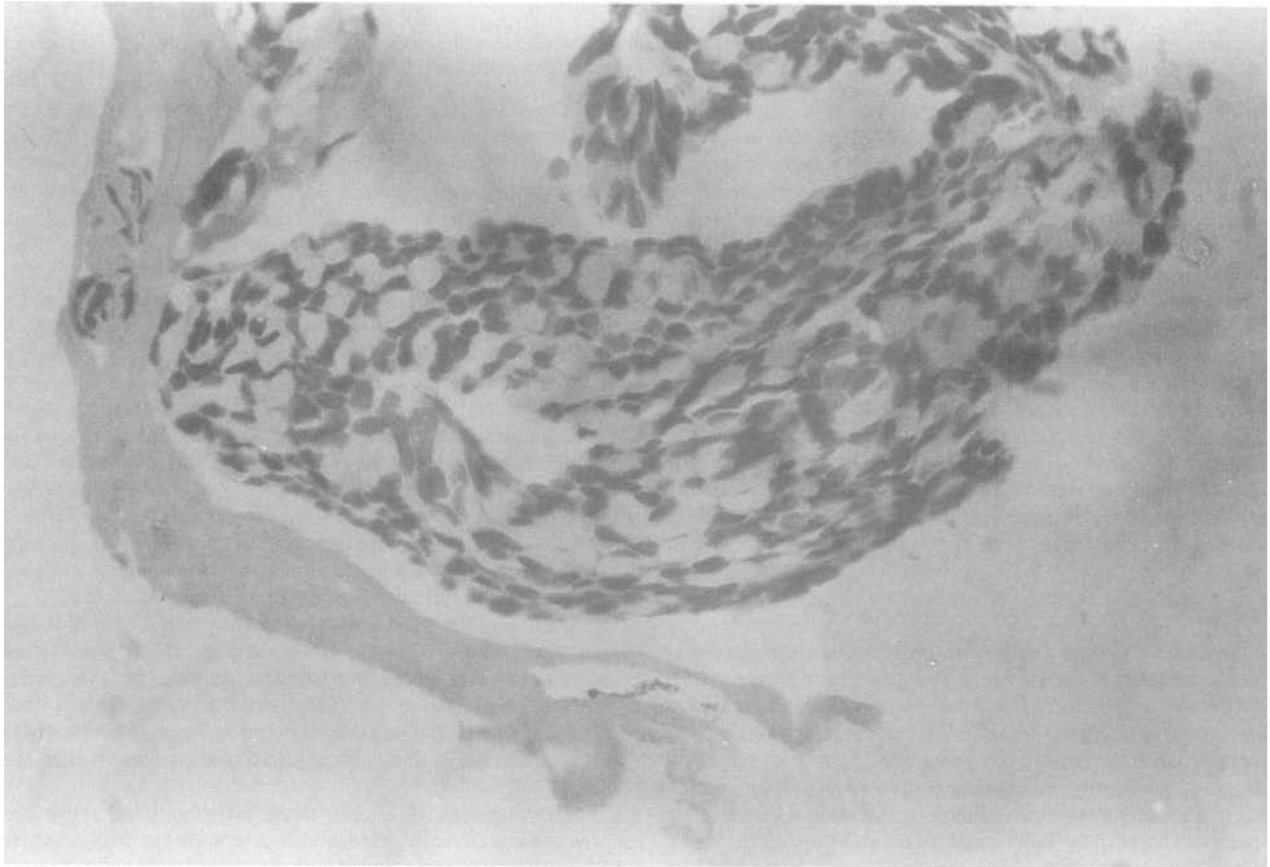


FIG. 3

FNAC: clusters of tumour cells exhibiting acinar formation and extracellular globules of basement membrane-like material are seen. (PAP; $\times 400$).

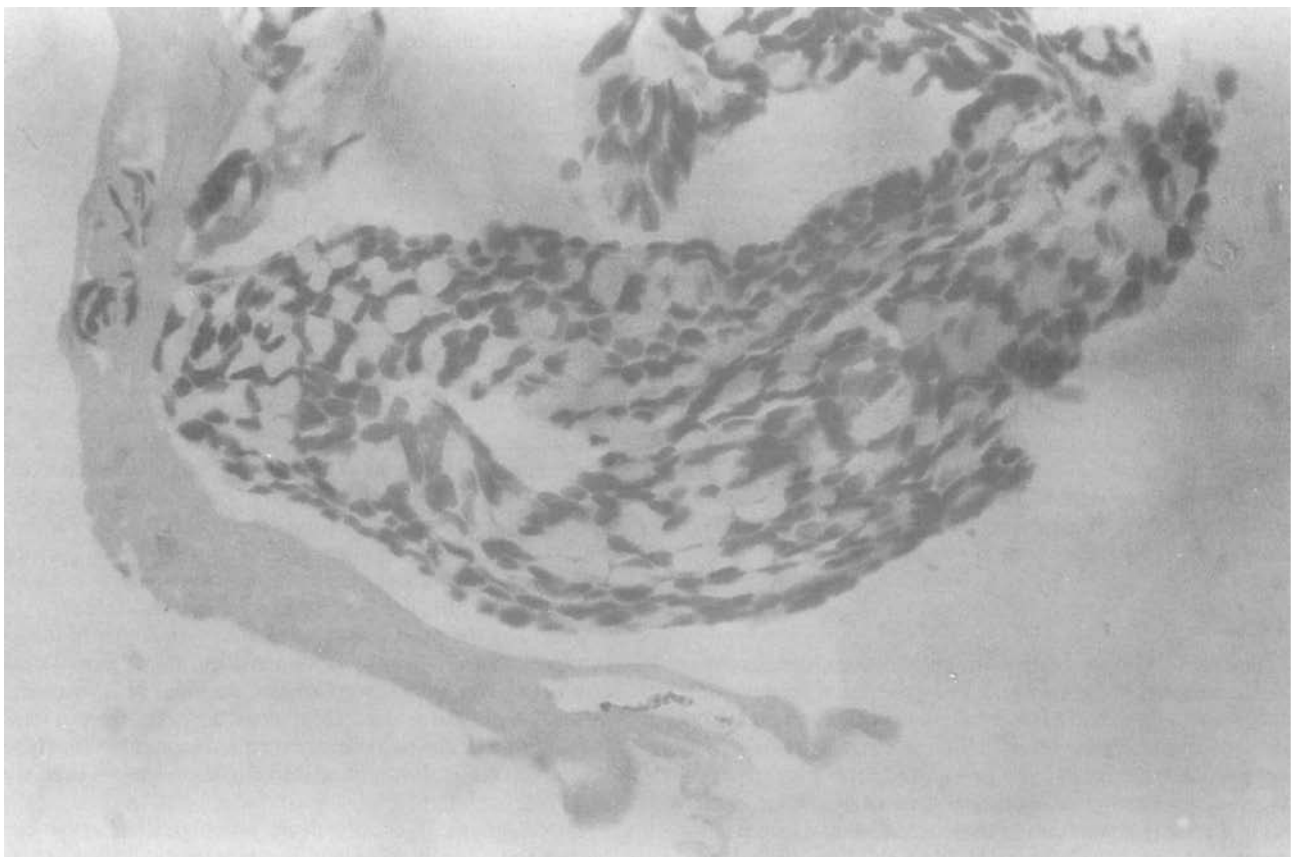


FIG. 4

FNAC, cell block: section showing sheets of tumour cells with multiple extracellular globules of basement membrane material. (H & E; $\times 400$).

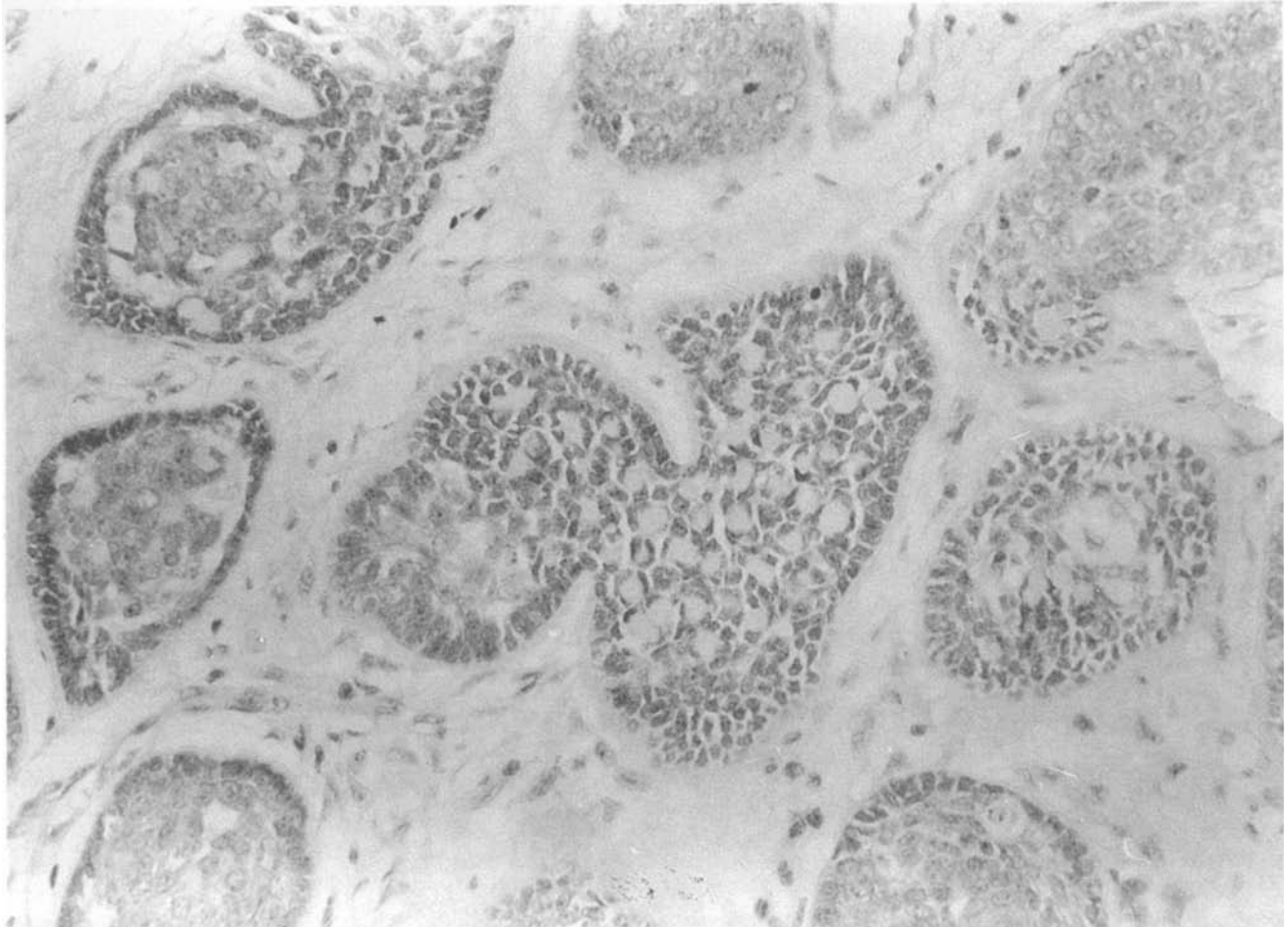


FIG. 5

Panoramic view of the tumour histopathology showing lobules of tumour cells arranged in mosaic/jigsaw pattern. Each lobule shows perilobular and intralobular deposition of basement membrane material. (H & E; $\times 250$).

was normal. Clinically the lesion was thought to be a benign tumour of the ear canal. X-ray of the mastoid region was normal. Fine-needle aspiration cytology (FNAC) was done. It showed cohesive clusters of cells with oval to spindle hyperchromatic nuclei and inconspicuous cytoplasm. There was acinar formation in which globules of rounded basement membrane-like material was noted (Figure 3). A cell block was prepared using the material obtained by FNAC. It showed sheets of tumour cells with multiple extracellular globules of basement membrane material (Figure 4). These features were considered to be consistent with a diagnosis of eccrine cylindroma. Treatment consisted of excision of the mass along with the conchal and tragal cartilages under general anaesthesia using an endaural approach. The resulting defect was repaired by local rotation skin flap. Histopathology of the removed mass confirmed the diagnosis of eccrine cylindroma (Figure 5). Ten months after removal there was no evidence of recurrence of the mass (Figure 2).

Discussion

Eccrine cylindroma, arising from ceruminous glands, is one of the rare tumours of the ear canal. Few cases have been reported in the literature to date. Mansour *et al.* (1992) proposed a more complete classification of ceruminous tumours wherein they suggested that eccrine cylindromas should form a separate subcategory under benign tumours. Ceruminous glands are numerous in the cartilaginous part of the external auditory meatus but sparse or absent in the bony canal (Main and Lim, 1976; Hicks, 1983). Based on electron microscopic evidence Main and Lim (1976) described ceruminous glands as having both apocrine and eccrine modes of secretion. This concept of apoeccrine gland,

thus explains the existence of eccrine cylindroma in the external auditory canal (Mansour *et al.*, 1992). Females are affected twice as often as males (Wilson and Johnson, 1980). The solitary type occurs over the face and scalp during adulthood. The multiple variety, however, appears early in life. It forms exophytic nodules involving the forehead and the scalp in the turban area, hence called turban tumours (Crain and Helwig, 1961). Eccrine cylindromas often occur in sites where sebaceous glands and hair follicles are also found. Thus neoplasms of sweat and sebaceous glands, tumours of hair follicles, cysts and epithelial tumour-like lesions may form a differential diagnosis (Wilson and Johnson, 1980). Usually it is a small, smooth, firm, pink to red, hairless nodule on the skin, which is rarely painful and seldom ulcerates. Histologically it shows islands of epithelial cells arranged in a mosaic pattern invested by a narrow band of hyaline material and separated from one another by thin bands of stroma. It is composed of two types of epithelial cells, one large with a moderate amount of cytoplasm and vesicular nucleus and the other with little cytoplasm and a compact nucleus.

Clinically the presentation of eccrine cylindroma of the ear canal depends on the size of the mass and the degree of canal obstruction causing hearing loss and otorrhoea but there are no distinctive clinical features. Malignant tumours are most likely to cause pain. It can become ulcerated and cause bleeding (Mansour *et al.*, 1992). It can present to the dermatologist (Lynde *et al.*, 1984).

The diagnosis is usually made histologically having been overlooked clinically. Fine-needle aspiration cytology is a useful diagnostic tool and coupled with the history and clinical examination is sufficient for the diagnosis of this tumour. Bondeson *et al.* (1983) reported, however, that aspiration cytology of benign

dermal eccrine cylindroma and adenoid cystic carcinoma may be indistinguishable. In the light of these findings every excised mass with FNAC diagnosis of eccrine cylindroma should be subjected to detailed histopathological examination.

Treatment of eccrine cylindroma is complete excision with a wide margin of normal skin (Hicks, 1983). Since malignancy is extremely rare in this kind of tumour simple excision suffices (Bondeson *et al.*, 1983). As eccrine cylindroma needs to be borne in mind when considering the differential diagnosis of a lesion in the outer ear canal. Local excision is recommended as the treatment of choice.

Acknowledgements

The authors would like to thank the Dean, School of Medical Sciences, University Sains Malaysia for permission to publish this paper. We also thank Sarimah bt. Yusoff for her secretarial assistance.

References

- Bondeson, L., Lindholm, K., Thorstenson, S. (1983) Benign dermal eccrine cylindroma. *Acta Cytologica (Baltimore)* **27**: 326–328.
- Crain, R. C., Helwig, E. B. (1961) Dermal cylindroma. *American Journal of Clinical Pathology* **35**: 504–515.
- Hicks, G. W. (1983) Tumours arising from the glandular structures of external auditory canal. *Laryngoscope* **93**: 326–340.
- Lynde, C. W., Mclean, D. I., Wood, W. S. (1984) Tumours of ceruminous glands. *Journal of the American Academy of Dermatology* **11**: 841–847.
- Main, T., Lim, D. (1976) The human external auditory canal secretory system – an ultrastructural study. *Laryngoscope* **86**: 1164–1176.
- Mansour, P., George, M. K., Pahor, A. L. (1992) Ceruminous gland tumours: a reappraisal. *Journal of Laryngology and Otology* **106**: 727–732.
- Wilson, R. S., Johnson, J. T. (1980) Benign eccrine cylindroma of the external auditory canal. *Laryngoscope* **90**: 379–382.

Address for correspondence:
Dr Hari Shankar Sharma,
Department of Otorhinolaryngology,
School of Medical Sciences,
University Sains Malaysia,
16150 Kota Bharu,
Kelantan,
Malaysia.