The Journal of Laryngology and Otology
September 1993, Vol. **107,** pp. 829–830

Clinical Records

External ear canal schwannoma: an unusual case report

CHE-MIN WU, M.D., CHUNG-FENG HWANG, M.D., CHIN-HAO LIN, M.D., CHIH-YING SU, M.D. (Taiwan, R.O.C.)

Abstract
To the best of our knowledge, this is the first report of external ear canal schwannoma in the English literature. Several detailed clinical and pathological features were demonstrated. We suggest that if a tender, encapsulated mass is found in the external ear canal, the diagnosis of schwannoma should be taken into consideration.

Key words: Schwannoma; Ear canal

Introduction

Schwannoma is a slow-growing benign tumour of neurogenic origin. The lesion is derived from the schwann cells surrounding neural tissue. It can grow in almost all regions of the body. It has been reported that approximately 25 per cent of schwannomas are found in the head and neck region, including the scalp, face, middle ear, mastoid, intracranial cavity, orbit, nasal and oral cavities, parapharyngeal space, medial and lateral regions of the neck, and the larynx. With regard to the external ear canal, schwannoma is rare. Reviewing the English literature we did not find any report of external ear canal schwannoma. In this report, we believe that several clinical and pathological photographs which we have prepared will be of some benefit in alerting the otologist to the possibility of schwannomas in the differential diagnosis of an ear canal mass.

Case report

A 50-year-old man attended our department with the chief complaints of right otalgia and bloody discharge for one month. The only finding on examination was a pinkish mass obliterating the right external ear canal (Figure 1). Biopsy was performed and the pathological report gave the diagnosis of schwannoma. Computed tomography (CT) showed a nonspecific soft tissue mass with irregular margins in the right external ear canal. The middle ear, mastoid, and internal auditory canal were normal. Magnetic resonance imaging (MRI) showed a well-defined soft mass in the right external ear canal (Figure 2). Excision of the tumour by the way of post-auricular approach was performed a few days later. A wide-based tumour mass connecting to the cartilaginous and bony junction of the external auditory canal was noted during the operation. The tumour was completely removed.

The post-operative course was uneventful. There was no local recurrence for one year of follow-up. Gross appearance of the specimen was ovoid in shape, elastic, well-encapsulated, and approximately 1 × 0.6 × 0.6 cm in size (Figure 3).

Histologically, the tumour exhibited the typical schwannoma pattern i.e. composed of compactly arranged spindle cells with palisading of nuclei (Antoni A) and spindle cells embedded in a loose stroma, forming no distinct pattern (Antoni B) (Figure 4).

Discussion

The external ear canal, as well as most of the body innervated by nerves which are sheathed by schwann cells, can be the site of

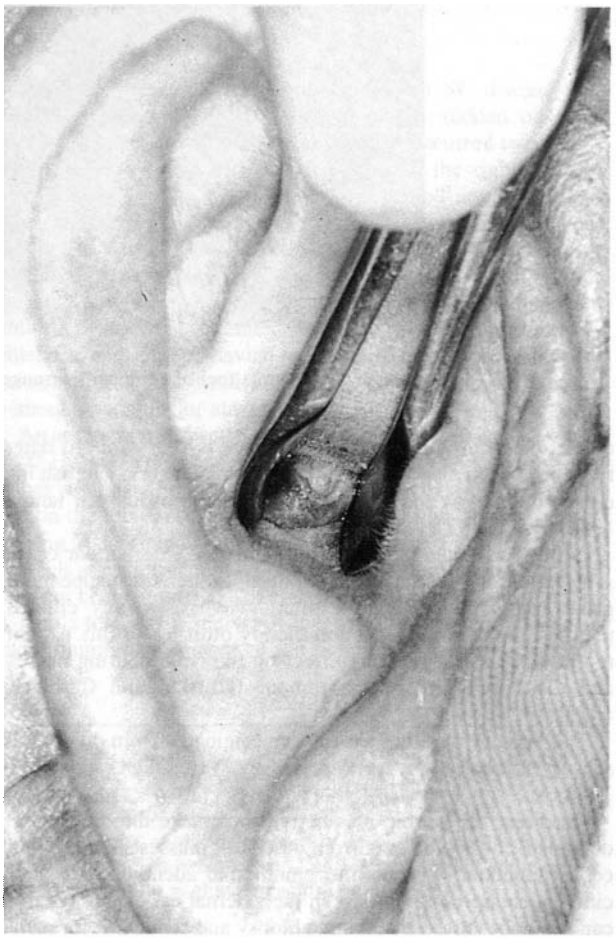

FIG. 1
A pinkish mass obliterating the right external ear canal.

Accepted for publication: 30 April 1993.

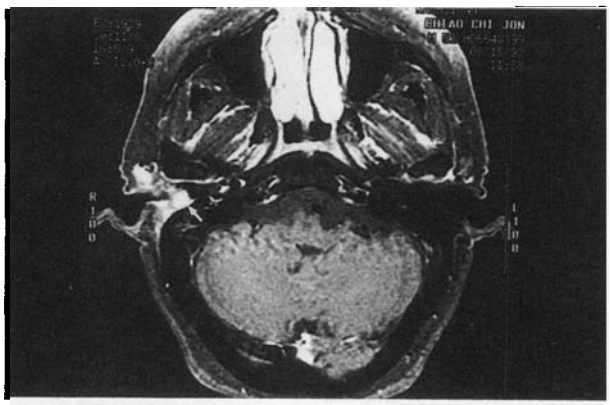

FIG. 2
MRI showing a well-defined soft mass in right external ear canal.

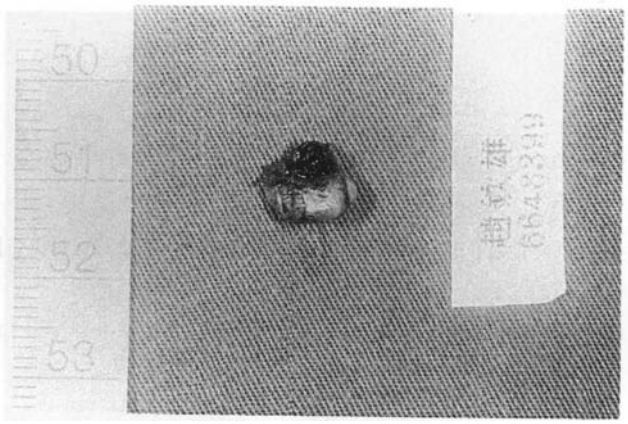

FIG. 3
An ovoid, elastic and well-encapsulated mass (1 × 0.6 × 0.6 cm).

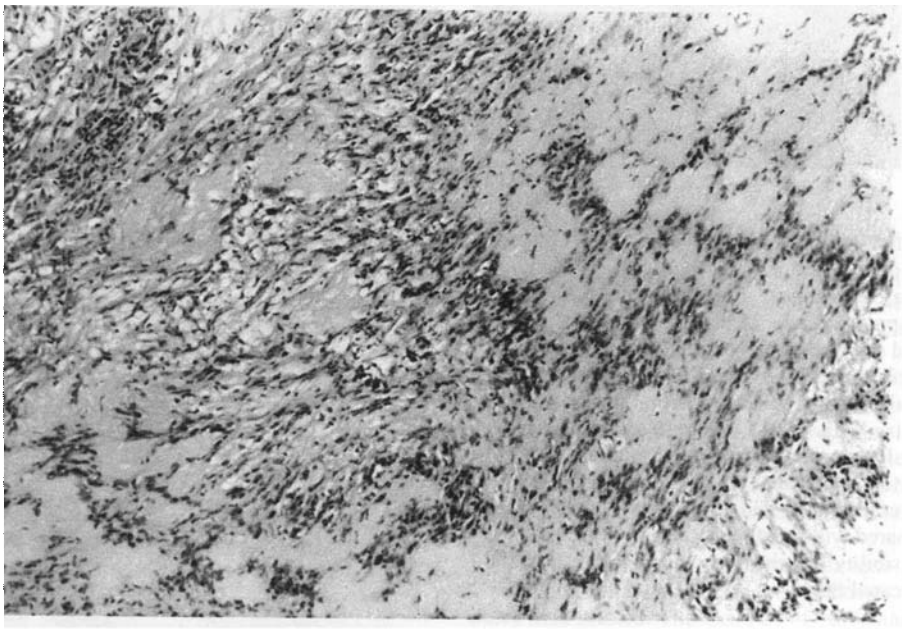

FIG. 4
Multiple foci of compactly arranged spindle cells with palisading of nuclei.

origin of a schwannoma. The incidence is very rare. To date, there have been only three cases reported in the non-English literature (Gorshkov and Iaroslavski, 1974; Bobrov and Kir'ianov, 1988; Cejas and Cejas, 1988).

From the limited case material available external ear canal schwannomas, like the schwannomas of other sites, appears to grow gradually and do not often give rise to any clinical manifestation. The otalgia and bloody otorrhea of this patient might be due to a pressure effect on the neighbouring nerves and the vascularity of the tumour (Gruskin and Carberry, 1979).

This tumour was thought to have originated from one of the sensory nerves supplying this area (V, VII, IX, X) (Tremble, 1965).

On direct inspection, it is not easy to make the differential diagnosis of schwannoma from other soft masses such as sebaceous adenoma, eosinophilic granuloma, adenoid cystic carcinoma, chondroma, fibroma in the external ear canal. Yet this can easily be solved by taking a biopsy and sending it for pathological confirmation.

It may be necessary to use CT to rule out schwannomas of the middle ear, mastoid, and internal auditory canal. MRI can demonstrate a more defined mass boundary but the MRI and CT findings are non-specific in the differential diagnosis of benign lesion in the external ear canal.

The recommended treatment is wide surgical excision. The recurrence rate is low, and the final result of treatment is satisfactory.

References

Bobrov, V. M., Kir'ianov, N. A. (1988) Neurinoma of the external auditory meatus. *Vestnik Oto-Rino-Laringologii* **1:** 65.

Cejas, M. L., Cejas, M. M. (1988) Neurilemmona of the external auditory canal: apropos of a case. *Acta otorrinolaringologica Espanola* **39:** 183–184.

Gorshkov, V. M., Iaroslavski, I. I. (1974) Neurinoma of the external auditory meatus. *Vestonik Oto-Rino-Larinogologii* **2:** 113–114.

Graskin, P., Carberry, J.N. (1979) Pathology of acoustic tumors. In *Acoustic tumors*, vol. 1, (House, W. F., Luetje, C. M., eds.), University Park Press, Baltimore, MD, pp 85–148.

Tremble, G. E. (1965) Referred pain in the ear. *Archives of Otolaryngology* **81:** 57–63.

Address for correspondence:
Dr Che-Min Wu,
Department of Otorhinolaryngology,
Chang Gung Memorial Hospital,
123, Ta-pei Road,
Niao-Sung Hsiany,
Kaohsiung Hsein,
Taiwan, R.O.C.
Fax: 010-886-7-7318762.

https://doi.org/10.1017/S0022215100124545 Published online by Cambridge University Press