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Schwannoma of the chorda tympani

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Abstract
The authors present a rare clinical entity in a schwannoma of the chorda tympani. The case is discussed including the difficulty in making the diagnosis and management.

Key words: Chorda Tympani Nerve; Neuroma; Diagnostic Imaging

Introduction

While neuroma of the facial nerve is a well-documented entity,[1–4] schwannoma involving the chorda tympani alone is very rare with only four reported cases in the English literature.[3,5–7]

A case of a chorda tympanic schwannoma thought at first to be a facial neuroma, is presented. The behaviour of the tumour and the radiological features were such that a working diagnosis of chorda tympani schwannoma was made prior to surgery.

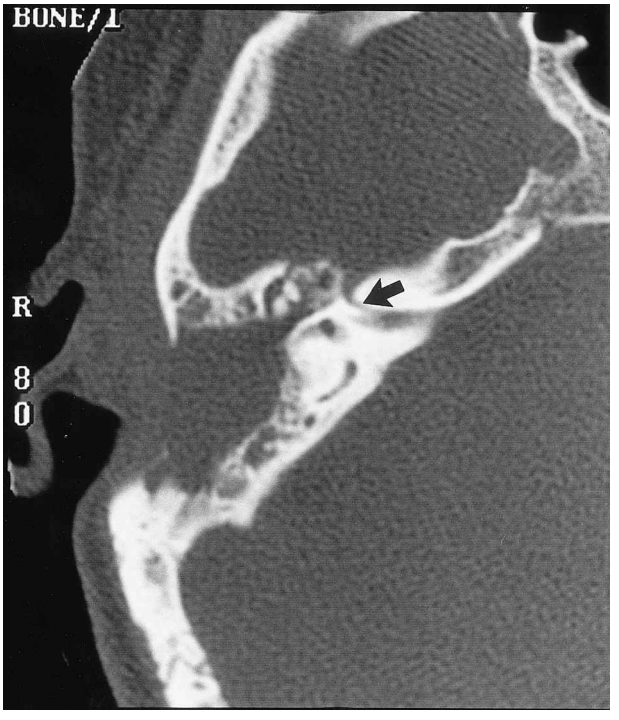

Fig. 1

This axial CT scan of the right petrous temporal bone shows a large mastoidectomy defect. The defect and the middle-ear cavity are filled with material the density of water, much of which proved to be tumour at operation. The labyrinthine segment of the facial canal looks normal (arrow).

Case report

A 26-year-old Caucasian female presented at another centre with a history of life-long ear disease. Granulation tissue was seen through an inferior perforation in the right tympanic membrane. At surgery a large tumour was noted in the middle ear. Biopsy revealed schwannoma. Facial nerve function remained normal. In the belief that this was a facial neuroma, an expectant policy was adopted. Conservative treatment failed to bring her otalgia and

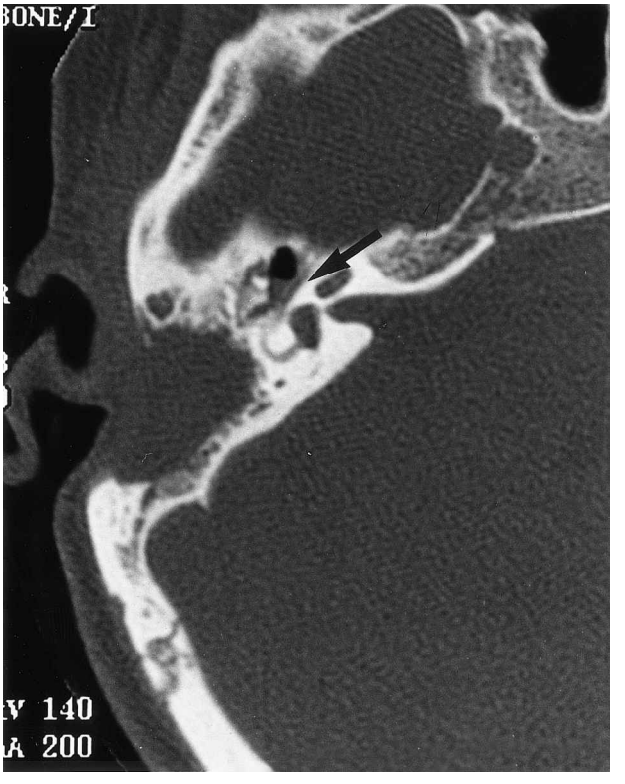

Fig. 2

This axial CT scan of the right petrous temporal bone shows a large mastoidectomy defect. The defect and the middle-ear cavity are filled with material the density of water. The tympanic segment of the facial canal looks normal (arrow).

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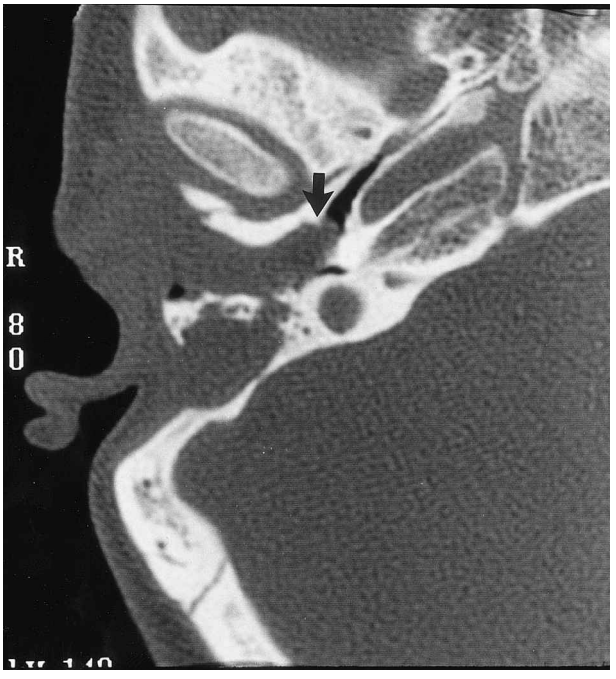

FIG. 3

This axial CT scan through the right hypotympanum shows tumour extending medially into the eustachian tube (arrow).

otorrhoea under control over a four-year period but during this time facial function remained normal. Review of further computed tomography (CT) and magnetic resonance imaging (MRI) (Figures 1–4) at this stage suggested that the intratemporal course of the facial nerve was

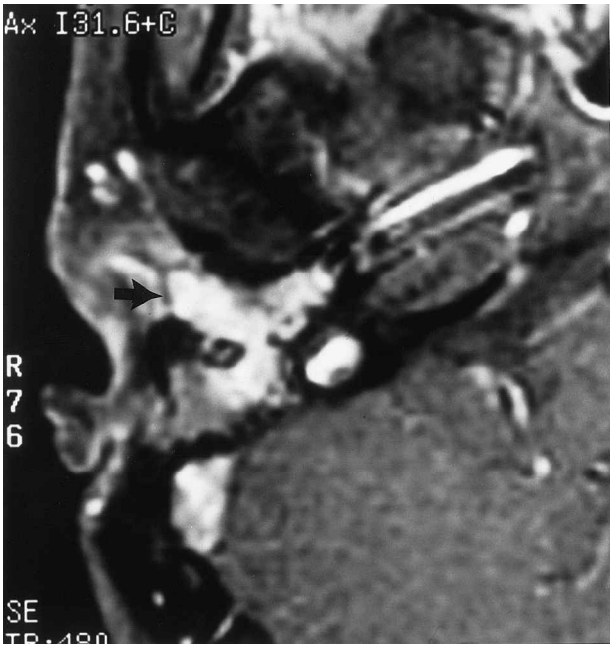

FIG. 4

This axial T1-weighted MR image of the right petrous temporal bone taken after the administration of gadolinium-containing contrast agent shows the extensive nature of the tumour in both the mastoidectomy defect, the middle-ear cavity and into the air cells lying lateral to the attic (arrow). The tumour appears white. Fluid in the mastoidectomy cavity lateral to the tumour is dark grey. The bright area posterior and medial to the tumour is the jugular bulb.

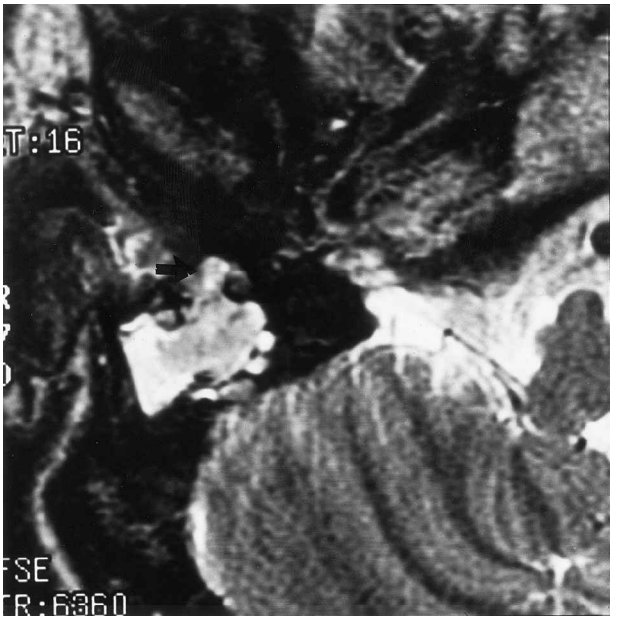

FIG. 5

This heavily T2-weighted axial fast spin echo MR scan of the right petrous temporal bone shows the tumour occupying the medial portion of the mastoidectomy defect and extending both forward and medially into the tympanic cavity and hypotympanum (arrow). The tumour appears grey. The white material lateral to it is fluid.

normal. A working diagnosis of chorda tympani schwannoma was made and surgery undertaken. The facial nerve was identified in the stylomastoid foramen and at the geniculate ganglion and traced through the tympanic and mastoid segments that were found to be normal. A large bilobed tumour was found arising from the chorda tympani. Blind sac closure was carried out. Facial function remained normal. Histopathology confirmed a neurilemmoma.

Discussion

Tumours of the chorda tympani are rare.[3,5–7] In the case presented, previous surgery confirmed the presence of schwannoma. CT, carried out after four years of observation, enabled the course of the facial nerve to be traced from the lateral end of the internal auditory canal, through the labyrinthine segment and geniculate ganglion to the horizontal and vertical segments and the stylomastoid foramen (Figures 1–3). Bone cover was shown to be complete in all these areas. Contrasted MR imaging revealed a mass of tumour, lying in the middle ear, eccentric to the course of the facial nerve (Figure 5) and lack of enhancement of the geniculate ganglion that is not typical of a facial neuroma.[8] Furthermore, facial function remained normal over four years despite biopsy at initial presentation. This led to the suspicion that this proven schwannoma was other than a facial nerve tumour, confirmed by review of further imaging studies.

Summary

Chorda tympani schwannoma can grow to a large size without development of facial paralysis. Careful assessment of bone window CT scans enables the course of the facial nerve to be traced. MR imaging will reveal a mass eccentric to the course of the facial nerve.

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References

1 Symon L, Cheesman AD, Kawauchi M, Bordi L. Neuromas of the facial nerve: a report of 12 cases. *Br J Neurosurg* 1993;**7**:13–22
2 Lipkin AF, Coker NJ, Jenkins HA, Alford BA. Intracranial and intratemporal facial neuroma. *Otolaryngol Head Neck Surg* 1987;**96**:71–9
3 Saleh E, Achilli V, Naguib M, Taibah AK, Russo A, Sanna M, *et al*. Facial neuromas: diagnosis and management. *Am J Otol* 1995;**16**:521–6
4 Sanna M, Zini C, Gamoletti R, Pasanisi E. Primary intratemporal tumours of the facial nerve: diagnosis and treatment. *J Laryngol Otol* 1990;**104**:765–71
5 Filho OL, Filho IB, Betti ET, Burlamachi JC, Eckley CA. Neuroma of the chorda tympani nerve. *Ear, Nose, Throat J* 1993;**72**:730–2
6 Weit RJ, Lotan AN, Brackmann DE. Neurolemmoma of the chorda tympani nerve. *Otolaryngol Head Neck Surg* 1985;**93**:119–21
7 Pou JW, Chambers CL. Neuroma of the chorda tympani nerve. *Laryngoscope* 1974;**84**:1170–4
8 Parnes LS, Lee DH, Peerless SJ. Magnetic resonance imaging of facial nerve neuromas *Laryngoscope* 1991;**101**:31–5

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