# Jugular Foramen Tumours

Pages with reference to book, From 143 To 144

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Tumours of the jugular foramen are rare and much less common than the acoustic neuromas. Glomusjugulare is the commonest type of tumour at this site while other tumours include Schwannomas, meningiomas, epidermoids, metastatic carcinomas, chordoinas and osteoclastomas. A case of ectopic glioma was reported in 1976[1]. Neunnomas have a marked predilection for young females and occur most frequently on the left side, inaratio of 9:1[2]. Hakuba et al[3] reviewed 42 previously reported cases of jugular foramen tumours including 12 personal cases of pluchino[4] and added 3 of their own. Kay et al[5] reported 13 cases treated at the Cleveland Clinic Foundation, Ohio. We present 3 cases of jugular foramen tumours, treated at the Neurosurgety Department of Civil Hospital, Karachi, between 1988 and 1993.

## Case Reports

### Case 1

A 60 years old male presented with 2 years history of occipital headache, left earache without discharge, vertigo and poor balance. His examination revealed bilateral papilloedema, horizontal nystagmus, a complete sensorineural deafness on the left side, an ipsilateral LMN facial weakness and hemiparesis. Both his plantars were extensors. CT showed a high density lesion in the left jugular fommen with obstructive hydrocephalus, suggestive of a meningioma. He had total excision of the tumour through a posterior fossa craniectomy with temporary ventricular drainage. The tumour was histologically confirmed to be a Schwannoma. Patient had transient difficulty with sputum retention which resolved alongwith his other symptoms. The deafness, however, persisted.

### Case 2

A 43 years old male complained of pain in the neck and right ear with deafness for 5 years. He had horizontal nystagmus, slurred speech, cerebellar ataxia, a right nerve deafness and an ipsilateral reduced cornea! reflex, CT showed a tumour in the right jugular fora.men. He had total tumour excision through a retromastoidcrarnectomy.

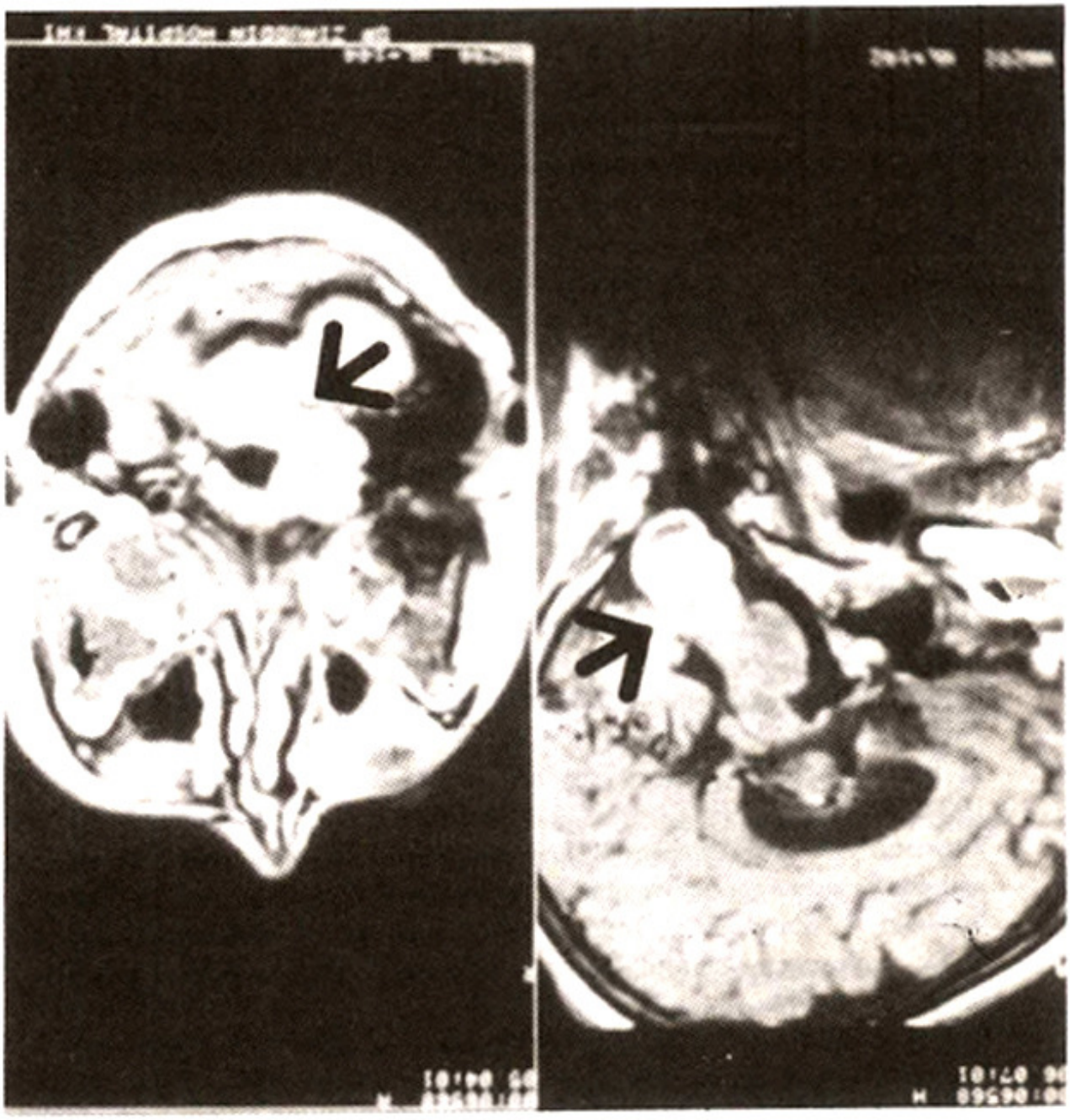

Figure. A post-contrast coronal and axial MRI showing a dumb-bell neurinoma in the right jugular foramen.

The tumour was histologically proven to be a neurinoma. Postoperatively the patient had lower cranial nerve palsies which took 2 nionths to recover. He had persistent deafness.

**Case 3**

A 35 years old female presented with 18 months history of progressive weakness of all the 4 limbs, suboccipital headache, swallowing difficulty and right sided deafness. On examination, she had spastic tetraparesis, LMN right facial palsy with cerebellar ataxia, coarse nystagmus, reduced cornea! reflex on the right and ipsilateral sensorineural hearing loss. CT showed an enlarged jugular foramen on the right. MRI showed a large dumb-bell shaped tumour (Fiugure) in the posterior fossa, arising from the right jugular foramen with considerable medullary compression. Carotid angiography ruled out the

possibility of a glomus tumour. She had a retromastoid craniectomy and it was discovered that the constriction in the middle of the tumour giving it a dumb-bell appearance was caused by an overstretched spinal root of right atcessoiy nerve. The neunnoma was totally excised and its histology confirmed. She had a total recovery except for the deafness.

## Discussion

Three cases of jugular foramen tumour are presented. Deafness was the commonest mode of presentation and often antedated other symptoms such as headache and difficulty with swallowing, phonation and balance. All 3 patients had sensorineural type of hearing loss on admission. In the review of Hakuba et al[3]. 36 out of 45 cases cited were deaf. Nine out of thirteen cases presented by Kaye et al[5] had deafness.

Only one of our patients had hydrocephalus with signs of raised intracranial pressure. Facial nerve weakness of LMN type was present in two patients, which is an unusual pre-operative finding with an acoustic nerve tumour. Hakuba et a!3 found that almost half the patients they reviewed had facial nerve involvement before surgeiy. All our cases had nystagmus, diminished cornea! reflex and cerebellar ataxia and two had long tract signs. All patients had a positive CT and only one patient had in addition an MIRI and a carotid angiography. Total excision was achieved in all the three patients and there was no mortality. Temporary difficulty with swallowing and sputum retention in the post-operative period resolved. All patients recovered completely except for deafness which did not resolve. Over a followup period of 3 months to 4-1/2 years there has been no recurrence. The differential diagnosis is between an acoustic and a jugular foramen tumour. Unilaterally enlarged jugular foramen and a normal internal auditory meatus on tomography in the presence of a jugular foramen syndrome is highly suggestive. Wide anatomical variations exist in the size of jugular foramen, attributed to the size of lateral sinuses as has been noted by Rhoton and Buza[6] and by DiChiro et al[7]. The right fommen is larger than the left. CT is usually diagnostic although an MRI provides better resolution of the tumour. Complete excision of these tumours is achieved through a suboccipital retromastoid cra.niectomy.

## References

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