CASE REPORT

CERVICAL SCHWANNOMA: CAN WE TREAT THIS RARE TUMOUR WITHOUT NEUROLOGICAL DEFICIT?

Ali Khan[1], Ameen Zaid Alherabi[2], Tariq Ahmed Al-Aidarous[2], Osama Abdul-Rehman Marglani[2], Tariq Hashem Bhutto[2]

[1]Department of ENT, Mufti Mehmood Memorial Teaching Hospital, D.I.Khan, Pakistan
[2]Al-Noor Specialist Hospital, Umm Al Qurra Medical College, Makkah, Saudi Arabia

ABSTRACT

Cervical schwannoma is an extremely rare tumour. It usually occurs in the third and fourth decades of life. Both sexes are equally affected. Usual presentation is slow growing lateral neck mass. These tumours are almost always benign and surgical removal is the treatment of choice. Here we present a case of cervical Shwannoma in 39 years old Indonesian male. The clinical features, imaging, pathological findings and post operative pictures of cervical shwannoma are discussed.

Key Words: Schwannoma; Benign tumour; Magnetic Resonance Imaging; Paraganglioma.

This article may be cited as: Khan A, Alherabi AZ, Al-Aidarous TA, Marglani OA, Bhutto TH. Cervical schwannoma: can we treat this rare tumour without neurological deficit? Gomal J Med Sci 2014; 12:242-4.

INTRODUCTION

Schwannomas are rare neural sheath tumours, generally benign, originating from neural crest.[1,7,8] About 25% to 45% of extracranial schwannomas arise in the head and neck region, in any point of the neuron axon from the skull base or spinal column down to the skin, mucosal or end-organ structures.[1] They are typically solid, well encapsulated, and running along the course of nerves.

Head and neck schwannomas usually involve V, V11, 1X, X, X1, X11 cranial nerves, sympathetic chain, brachial or cervical plexus.[1,5] They are usually asymptomatic benign lesions.[6] Imaging, particularly Magnetic Resonance Imaging (MRI) has a key role in diagnosis and has become the routine imaging study for these tumours.[2,4] Malignant transformation is very uncommon. Histologically, it has two components; Antoni A and Antoni B. Antoni A area comprises of compact spindle schwann cells with elongated nuclear palisade, Antoni B area has foamy histiocytes and few lymphcytes.[1] Treatment of schwannoma is surgical removal.[6]

CASE REPORT

A 39 year old Indonesian male presented to Al-Noor Specialist Hospital, Makkah, Saudi Arabia in 2007 with neck swelling on left side for more than two years. The swelling was along the upper border of sternocleidomastoid muscle measuring around 5x7 cm in size. Mass was firm, smooth, non tender, mobile from side to side, non-pulsatile with no bruit. All routine blood investigations were normal. Initially his work up was carried out for metastatic neck disease, including twice fine needle asipration cytology (FNAC) from the mass, Pan-Endoscopy and biopsies from upper aero digestive tract, which were negative. Further work up started. CT Scan with contrast of the neck showed a mass of 4.5x3.5x6.5 cm in the carotid space with heterogenous enhancement with non enhancing area of cystic degeneration, compressing the internal jugular vein and displacing it from carotid vessels. MRI with gadolinium contrast was done, showing heterogenous intense contrast enhancement of the solid component of the mass (Figure. 1a & 1b). A diagnosis of vagal schwannoma was made.

On exploration of the neck through cervical incision, vagus nerve was found to be normal (Figure. 2a). Exact origin of the tumour could not be ascertained; post operative Horner's syndrome favors its sympathetic origin as we had to open carotid space. Tumour was removed completely (Figure. 2b). Histopathology report came as schwannoma (Figure. 3). Post operative, patient had feature of moderate Horner's syndrome.

DISCUSSION

Schwannomas are uncommon tumours.[1,6] Hence, clincal presentation reported in public serires vary wdely.[1] Similarly wide age distribution is also

Corresponding Author:
Dr. Ali Khan
Department of ENT
Mufti Mehmood Memorial Teaching Hospital
D.I.Khan, Pakistan
E.mail: ihdena01@hotmail.com

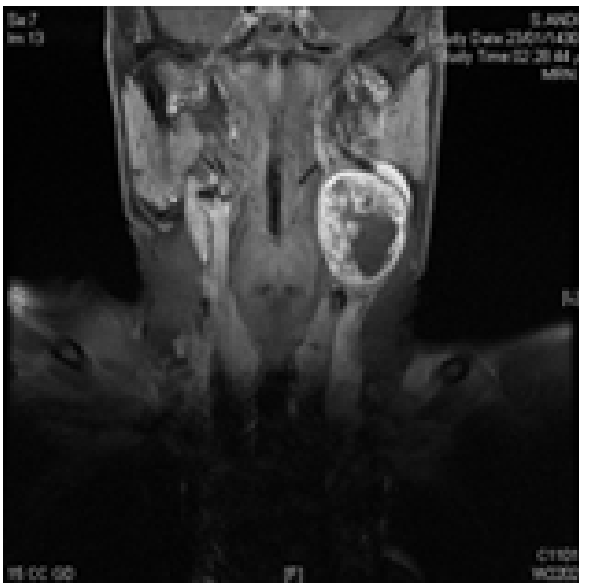

Figure 1a: Coronal MRI with gadolinium contrast of a Cervical schwannoma in a 39 years old man, showing heterogenous intense contrast enhancement of its solid component.

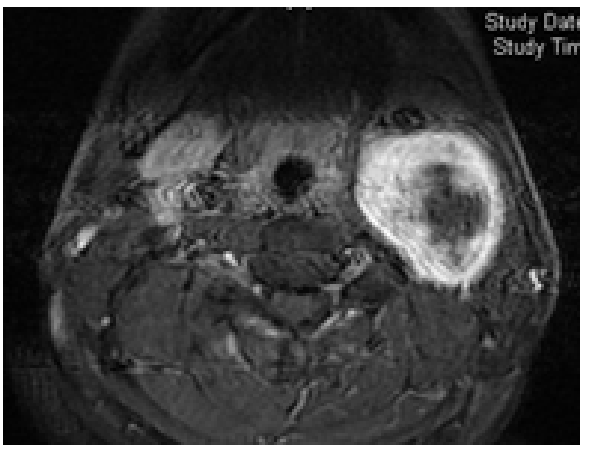

Figure1b: T2 weighted MRI axial cut of a cervical schwannoma in a 39 years old man, showing hyper intense mass at carotid space separating internal jugular from carotid vessel.

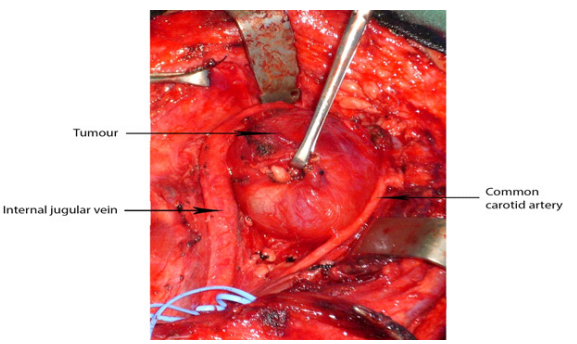

Figure 2a: Per-operative cervical schwannoma in a 39 years old man.

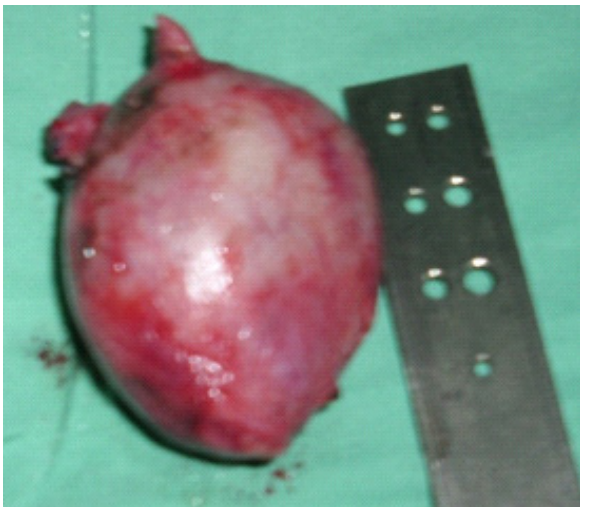

Figure 2b: Gross morphology of cervical schwannoma, size 4.5x3.5x6.5 cm in a 39 years old man.

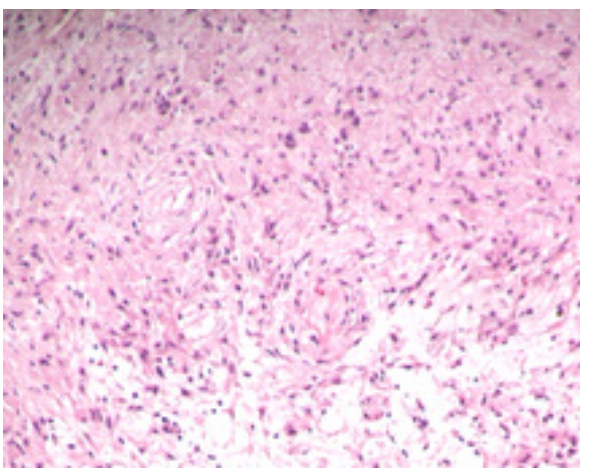

Figure 3: Microscopic view of cervical schwannoma in a 39 years old man, showing Antoni A & B areas.

reported in literature with median in third or fourth decades of life.[1] Schwannoma is described as neural sheath tumour which arises inside nerve and splaying its fibres while growing.[1] Usual symptom is a slow growing neck mass.[2] Clinical diagnosis is difficult because they do not present with neurological deficits. Differential diagnosis for tumours can be considered like paragangioma, malignant lymphoma, branchial cleft cyst, and metastatic neck mass.[2] In our case we considered metastaic neck disease from beginning because of the high prevelance of the head and neck malignancy in Makkah region.

Fine needle aspiration cytology (FNAC) is controversial. In our case we repeated twice but inconclusive. Immaging is important in head and neck schwannoma, the purpose is to differentiate between vagal or sympathetic shwannoma and paraganglioma.[3] On plain CT scan schwannoma

is hypodense while with contrast there is some degree of enhancemnet, while on TI MRI there is low signal intensity, and on T2 MRI there is high signal intensity.[3,4] Paraganglioma is isodense on plain CT while homogenously enhanced with contrast.[3,4] MRI with gadolinium contrast for paragangliomna showes intense enhancement, typically salt-and-pepper pattern, representing the low signal intensity of vascular flow void, although not pathognomic for paraganglioma.[3]

Schwannoma is a benign tumour, although malignat degeneration has been reported.[5,8] Malignant tumours represent about 4% of neck schwannomas and diagnosis is established after surgery.[1] Two distinct areas have been observed histologically; Antoni A and Antoni B areas. Antoni A area comprises of tightly packed spindle-shaped cells,while in Antoni B region the cells are loosely packed.[1,5]

Treatmet is complete surgical removel.[6] Open biopsy should be avoided as it makes complete excision more difficult.

CONCLUSION

Surgical resection of cervical schwannoma almost always leaves the patient with Horner's syndrome, which is relatively asymptomatic.The surgeon and the patient should be aware of it.

REFERENCES

1. De Araujo CE, Ramos DM, Moyses RA, Durazzo MD, Cernea CR, Ferraz AR. Neck nerve trunk schwannomas: clinical features and postoperative neurologic outcome. Laryngoscope 2008; 118: 1579-82.
2. Chiofalo MG, Longe F, Marone U , Franco R, Petrillo A, Pezzullo L. Cervical vagal schwannoma. A case repert. Acta Otorhinolaryngol Ital 2009; 29:33-5.
3. Bocciolini C, Dall'olio D Cavzza S, Laudadio P. Schwannoma of cervical sympathetic chain: assessment and management. Acta Otorhinolaryngol Ital 2005; 25:191-4.
4. Wax MK, Shiley SG, Robinson JL. Cervical sympathetic chain schwannoma. Laryngoscope 2004; 114:2210-3.
5. Rosner M, Fisher W, Mulligan L. Cervical sympathetic schwannoma: case report. Neurosurgery 2001; 49:1452-4.
6. Hood RJ, Reibel JF, Jensen ME, Levine PA. Schwannoma of the cervical sympathetic chain. The Virginia experience. Ann Otol Rhinol Laryngol 2000; 109:48-51.
7. Ku HC, Yeh CW.Cervical schwannoma: a case report and eight years review. J Laryngol Otol 2000; 114:414-7.
8. Liorente Arenas EM, Vicenta Gonzalez E, Adiego Leza I, Damborenea Tajada J, Martinez Bergenza R. Lateral cervical tumor of neural etiology: cervical schwannoma. An Otorrhinolaringol Ibero Am 2001; 28:233-40.

CONFLICT OF INTEREST
Authors declare no conflict of interest.
GRANT SUPPORT AND FINANCIAL DISCLOSURE
None declared.