DOI: 10.14260/jemds/2014/2567

CASE REPORT

AN AMAZINGCASE REPORT OF CERVICAL SHWANNOMA

Ruqia Asna Rabah[1], Shakeel Ahmed Khan[2], Khudsia Fatima[3], M. M. Baig[4]

HOW TO CITE THIS ARTICLE:
Ruqia Asna Rabah, Shakeel Ahmed Khan, Khudsia Fatima, M. M. Baig. "An Amazing Case Report of Cervical Schwannoma". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 19, May 12;
Page: 5157-5160, DOI: 10.14260/jemds/2014/2567

ABSTRACT: This is a case report of a patient with history of vague chest pain and facial numbness. When the patient was subjected for evaluation he was found to have cervical Schwannoma. He was operated and was successfully treated. Schwannomas are extramedullary-intradural tumors composed of Schwann cells, which can arise from spinal nerves at any level (cervical, thoracic, lumbar, or cauda equina) and most often arise from a posterior (sensory) nerve root. The most common initial symptom therefore is pain in a radicular distribution. Early detection and surgery gives excellent results in such cases.

KEYWORDS: SCHWANNOMAS, CERVICAL REGION, SPINAL CORD.

INTRODUCTION: Schwannoma originates from the sheath of spinal cord roots - neurilemma or Schwann cells (so it is mainly called neurilemmoma or Schwannoma) and make one third of primary spinal cord tumors.[1] The tumor localization is in various parts of spinal cord, but prevails in cervical and thoracic, rare in lumbar and sacral regions. It can grow exophytic above and below the dura of spinal cord (extremely rare intramedullary) or involve the spinal root and interfere its fibers.[2] According to histological structure schwannoma is benign tumor, but growing in the narrow spinal canal makes a severe pathological situation: pain and later on the signs of spinal cord compression. It is pointed out that when the diagnosis of schwannoma is early and operation is performed before the spinal cord compression, good results are achieved.[2,3] Schwannomas grow slowly, and pain may be present for years before the correct diagnosis is made, especially when in the relatively spacious lumbosacral region. Schwannomas of nerve roots in the relatively tight cervical region are more likely to compress the spinal cord early in their course.[4] In our case the patient had presented with only radicular pains in the areas over face and nape of the neck. He did not have any history of weakness of upper limbs or lower limbs. He even did not have any bladder symptoms. During examination for tenderness over the spinal area, when pressure was applied at cervical spine patient felt sudden onset of numbness over face and neck. This gave an alarming sensation for us to investigate further for any neurological abnormalities.

CASE REPORT: A male patient aged 36 years complained repeated attacks of chest pain more in the left side of chest, sharp and transient which lasted for few minutes to a maximum of half an hour. It was associated with giddiness and numbness of both upper limbs and area over the nape of the neck. He also had history of numbness over face. All his symptoms were present since two years. Patient was evaluated for ischemic heart disease repeatedly before the diagnosis of cervical spinal cord tumor was done.

There was no family history of Von Recklinghausen's disease.

Patient underwent surgical excision of the tumor. Postoperative paraparesis was present in both lower limbs for one month. After that the patient was perfectly normal and was leading a normal life.

DOI: 10.14260/jemds/2014/2567

EXAMINATION: It revealed a young adult male well-built and nourished aged 36years.His pulse was normal and his blood pressure was 140/100. His central nervous examination was within normal limits except for radicular symptoms in both upper limbs and over nape of the neck and over the face. Rests of other systems were within normal limits.

INVESTIGATIONS: HB-14 gm, Total count of 11, 000cells/cumm and DC of N-72%, L-24%, E-01%, and M-01% with ESR of 50mm/hr. His blood urea was 36mg/dl and serum creatinine was 1.1mg/dl. Urine examination was within normal limits. His ECG, echocardiograph examination and TMT were within normal limits. His MRI was done which showed a heterogeneously enhancing dumbbell shaped lesion in left C6-C7 neural foramen causing mild widening of foramina and was seen extending to ipsilateral anterior epidural space with intra spinal component measuring 10x8x10 mm. Cord was seen compressed and displaced to right and posterior by the lesion with altered signal intensity within the cord. The foraminal and extraforaminal component appeared larger measured 18x10 mm. All the above findings were in favor of neurogenic tumor likely to be schwannoma. After excision the tumor was sent for histopathological examination which showed a cellular tumor composed of plump spindle shaped cells with abundant eosinophilic cytoplasm. Nuclear palisading was seen with 'Vero cay bodies'. Few degenerated nuclei were present but there was no mitosis seen anywhere. Final impression was schwannoma.

CASE DISCUSSION: Spinal Schwannomas make up approximately 30%of all primary spinal cord tumors. 70% schwannoma arises from sensory root, 20% from motor roots and rest from both motor and sensory roots.[1, 2] About 75% Schwannomas are intradural, 10% intra-extradural and rest (15%) are extradural, though some authors have noted a predominance of extradural location of Schwannomas at C-2.[2,3,4] Among the Schwannomas arising from C1, C2, & C3 spinal roots, C2 spinal root tumors are commoner and constitutes 15% of all spinal Schwannomas.[3, 4] A multiplicity of Schwannomas is frequently noted in cases involving NF Type 1. A multiplicity of Schwannomas at any spinal level is reported in approximately 4% of cases.[5, 6]

These tumors are located lateral, anterolateral, or anterior to the spinal cord. Several posterior, posterolateral, lateral, and anterolateral approaches have been described to surgically approach these tumors.[7, 8] But it has been noted that standard midline posterior approach is most suitable and most appropriate to resect almost all types of cervical Schwannomas with transtumoral resection techniques. A similar surgical strategy had been reported by several investigators in the past.[8, 9]

These tumors are usually moderately vascular and firm inconsistency. Such schwannomas are relatively simple to resect because they have a well-defined arachnoid plane of dissection intradurally and well defined capsule extradurally.[8, 9] The exposure used in the surgery (midline posterior approach) is standard and quick and there is no need for manipulation of any cranial nerves, blood vessels, or joints to affect exposure. Concerning bony stability, after laminectomy of cervical spine, instability or deformity frequently occurred, especially in dumbbell type tumor, in which cases additional bony removal is required to remove the tumor. Although no immediate instability is noted, long time follow up is advised for this problem. But if instability is present it should be stabilized immediately.[10]

DOI: 10.14260/jemds/2014/2567

DD: 1.MENINGIOMA
2. TUBERCULOUS SPINE
3. SRYINGOMYELIA
4. SUB ACUTE DEGENERATION OF SPINAL CORD

REFERENCES:

1. Cervoni J, Celli P, Scorpinati M, Cantore G. Neurinomas of cauda equina clinical analysis of 40 surgical cases. Acta Neurochir 1994; 127: 199-202.
2. Kim P, Eberhold MI, Onofrio BM, et al. Surgery of spinal nerve schwannoma: risk of neurological deficit after resection of involved root. J Neurosurg 1989; 71: 810-4.
3. Levy WJ, Latchaw J, Hahn JF, et al. Spinal neurofibromas: a report of 66 cases and a comparison with meningiomas. Neurosurgery 1988; 18: 331-4.
4. Belzberg AJ, Campbell JN. Neoplasms of the peripheral nerves. In Wilkins RH, Rengachary SS, editors: Neurosurgery. 2nd edition. New York: McGraw-Hill; 1996. pp. 3217-3223
5. Krishnan P, Behari S, Banerji D, Mehrotra N, Chhabra DK, Jain VK. Surgical approach to C1-C2 nerve sheath tumors. Neurol India 2004; 52: 319-324.
6. Kyoshima K, Uehara T, Koyama J, Idomari K, Yomo S. Dumbbell C2 schwannomas involving both sensory and motor rootlets: report of two cases. Neurosurgery 2003; 53: 436-440.
7. McCormick PC. Surgical management of dumbbell tumors of the cervical spine. Neurosurgery 1996; 38: 294-300.
8. Nittner K. Spinal meningiomas, neuromas and neurofibromas, and hourglass tumors. In Vinken PH, Bruyn GW editors. Handbook of Clinical Neurology: Tumours of the Spine and Spinal Column New York: Elsevier; 1976. pp.177-322.
9. Onofrio BM. Intradural extramedullary spinal cord tumors. Clin Neurosurg 25: 540-555, 1978.
10. Seppälä MT, Haltia MJ, Sankila RJ, Jääskeläinen JE, Heiskanen O. Long-term outcome after removal of spinal neurofibroma. J Neurosurg 1995; 82: 572-577.

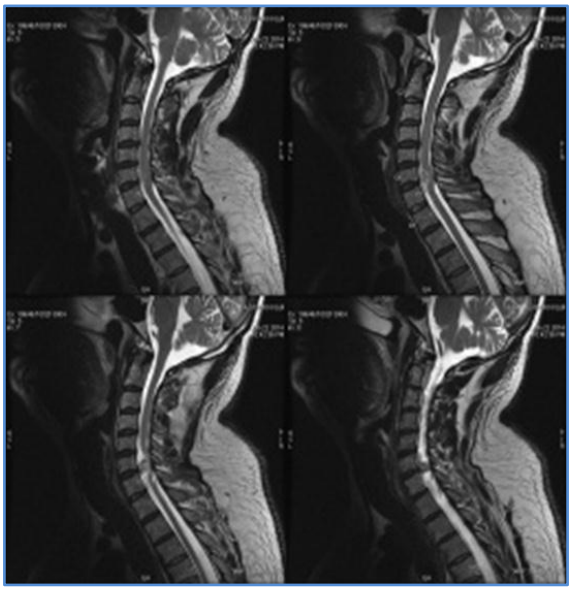

Fig.1: MRI showing dumbbell shaped lesion in C6-C7 neural foramen

DOI: 10.14260/jemds/2014/2567

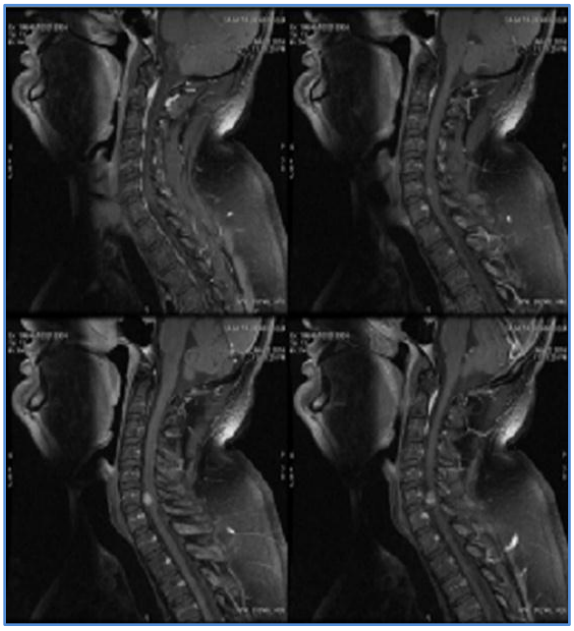

Fig. 2: T2 weighted images showing enhancement of tumor

AUTHORS:

1. Ruqia Asna Rabah
2. Shakeel Ahmed Khan
3. Khudsia Fatima
4. M. M. Baig

PARTICULARS OF CONTRIBUTORS:

1. Physician, Department of Medicine, District Hospital, Gulbarga.
2. Paediatrician, Department of Medicine, Alnoor Hospital, Gulbarga.
3. Junior Resident, Department of Medicine, District Hospital, Gulbarga.
4. Civil Surgeon, Department of Medicine, District Hospital, Gulbarga.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Ruqia Asna Rabah,
Physician,
District Hospital,
Gulbarga.
E-mail: drasnakhan@gmail.com

Date of Submission: 28/03/2014.
Date of Peer Review: 29/03/2014.
Date of Acceptance: 23/04/2014.
Date of Publishing: 08/05/2014.