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Case report

Mobile Schwannomas of lumbar spine: A diagnostic dilemma☆

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ABSTRACT

Mobile Schwannoma is a very rare entity and is reported sparsely in literature, with most of them occurring in lumbar spine region. We present a case of seventy-year-old male patient who had pain in lower back radiating to ipsilateral thigh. A diagnosis of migratory tumour was made based on findings of plain and contrast MRI preoperatively. We did a two level laminectomy and tumour excision. In this report, we intend to discuss various likely causes of tumour migration and various diagnostic methods to tackle this surgical dilemma, we have also attempted to review the sparse literature available till date on migratory lumber schwannoma.

1. Introduction

Schwannoma is the most common nerve sheath tumour constituting about eighty-five per cent of nerve sheath tumours, combined with neurofibromas these constitute about 30% of all spinal neoplasms.[1] They occur equally among both sexes and are common in fourth to sixth decade. Nerve sheath tumours are dispersed equally along the various spine segments with no clear predilection to any particular region of spine. Migratory schwannomas are thought to be very rare and sparsely documented in available literature, lumbar spine is the most frequent site of mobile schwannomas. However, there are case reports available in literature depicting their occurrence in cervical and thoracic spine. These migratory tumours source diagnostic as well as surgical hurdles, in the worst case scenario the operative finding didn't revealed any tumour at the predetermined level and an extension of laminectomy and durotomy was needed, even that was not successful in all the cases.[2–5] We present a similar case of migratory lumbar schwannoma in which we had to do an extended laminectomy and durotomy for successful excision of tumour.

2. Case report

A seventy-year-old male, previously healthy, presented to our spine clinic with chief complaint of pain lower back radiating to right buttock since one month. The pain was gradual in onset, constant in duration and radiating to right side buttock more so in evening and night disturbing sleep pattern. The pain was associated with tingling and numbness in the affected region; there were no aggravating or relieving factors. There was no history of any significant trauma in recent past, no history of fever, no symptoms of similar complaint or low back pain in past. A thorough examination of patient revealed diffuse tenderness of lumbar spine, straight leg raising test was normal on both sides. There were no signs of root compression. Examination for sacroiliac joint was within normal limits. Complete neurological examination was performed; patient had grade five power of all lower limb muscles as per MRC grading, reflexes were normal and sensory system was intact. There was no change in symptoms in different postures and on Valsalva manoeuvre. An x-ray was advised which depicted mild degenerative changes in lumbar spine and fuzziness of sacroiliac joint on right side, but none of the finding can explain the severity of symptoms (Fig. 1). Complete blood profile was done including markers of infection and all the parameters were within range. MRI of lumbosacral spine with screening of whole spine was done, MRI revealed an isointense lesion at L2-L3 level suggestive of nerve sheath tumour (Fig. 2a). However, contrast study of lumbosacral spine portrayed the lesion

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Fig. 1. Pre-operative radiograph of lumbosacral spine anteroposterior and lateral views showing degenerative changes in spine and fuzziness of right sacroiliac joint.

Fig. 3. Axial cut of contrast MR showing the tumour to be central in location.

to be at L3-L4 level (Fig. 2b). The lesion appeared to be centrally located on contrast enhanced MR imaging (Fig. 3) The patient was planned for surgery with the presumptive diagnosis of migratory schwannoma. A standard midline approach was used to expose the lamina and posterior elements, laminectomy and durotomy was done at L2-L3 level but we were unable to locate the tumour. Laminectomy and durotomy was extended to involve the next level i.e. L3-L4 and the tumour was successfully excised and sent for histopathological examination, (Fig. 4) wound was closed back in layers after achieving haemostasis. The tumour was found to be originating from L3 Nerve Root, complete excision of tumour was done without causing any damage to nerve root. Histopathological examination confirmed the diagnosis of schwannoma (Fig. 5) The patient's symptoms improved significantly, his low back pain, radiating pain and numbness were relieved completely. A post-operative MRI was obtained which revealed complete resection of tumour in comparison to previous study (Fig. 6). A diagnosis of mobile lumber schwanoma though very rare was made based on MRI and histopathological findings.

3. Discussion

In 1974, Tomimatsu et al. was the first to describe a case of mobile schwannoma of cervical spine with a discrepancy of two levels caudally.[19] Wartzman and Botrel were the first to describe

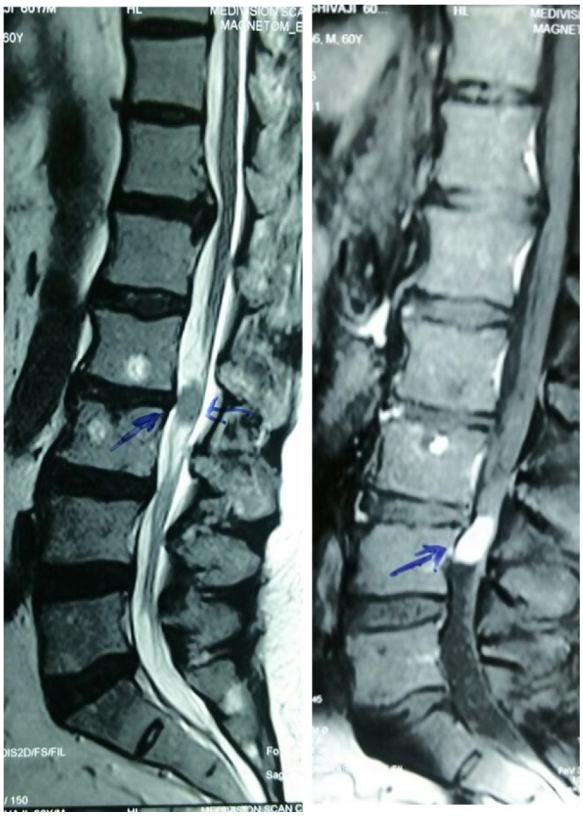

Fig. 2. (A) on the left a sagittal MR image showing the lesion to be at L2-L3 level. (B) on right a contrast enhanced sagittal MR showing the lesion to be at L3-L4 level.

Fig. 4. Completely excised tumour sent for histopathological examination.

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