A Rare Encounter: Vertebral Neurofibroma

[1]G Felicia; [1]Lim HS; [1]Norisyam ; [2]Lee SK; [1]KB Zairul Anuar

[1]Department of Orthopaedic Spine, Penang General Hospital; [2]Department of Pathology, Penang General Hospital

INTRODUCTION:

Vertebral neurofibroma is rare benign neoplasm. It arises from Schwann cells or their precursor cells of the peripheral nerves within the vertebral canal. Although benign, they can cause significant morbidity due to their potential to compress neural structures within the spinal canal.

REPORT:

We present case of 18-year-old male, with no medical history, presented with occipital pain radiating to the temporal region and intermittent tolerable radicular pain over left upper limb, seldom requiring analgesia. The patient denied history of tuberculosis exposure, prolonged fever, night sweats, or weakness. No myelopathic signs on examination. Blood investigations were normal.

MRI showed expansile lytic lesion with heterogenous enhancement involving posterior elements of C6,C7 and T1, measuring 3.2x1.1x4.1cm. Left C6/C7 and C7/T1 neural foramina were narrowed causing compression of left C7 and C8 exiting nerve roots. Otheriwse there were no expansion into the spinal canal.

CT-guided biopsy was performed, yielding greyish tissue. Microscopic examination revealed elongated, spindle-shaped cells with wavy wrinkled dark-staining nuclei, exhibiting rare mitoses and no evidence of necrosis. The lesional cells were embedded within a fibrillary stroma composed of faintly eosinophilic, thin, wire-like collagenous fibers, extending in various directions. Immunohistochemistry demonstrated positivity for CD34 and S100 markers, confirming the diagnosis of neurofibroma.

Patient opted for conservative management in view of high risk and morbidity of the planned surgery. Given the absence of worsening symptoms and stable MRI findings, the patient opted to close monitoring

Figure 1:

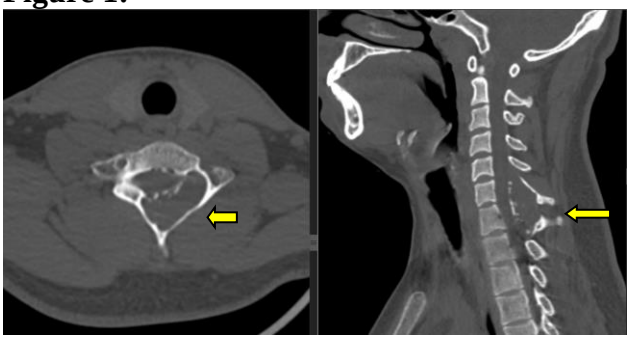
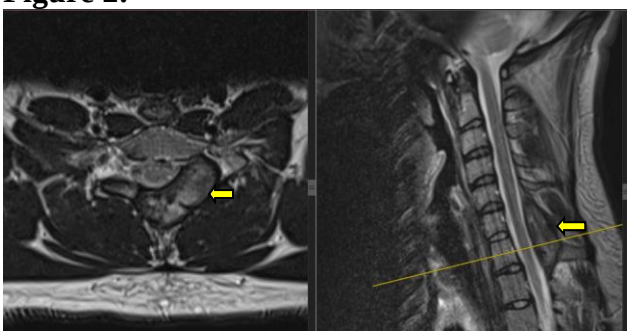


Figure 2:



CONCLUSION:

Vertebral neurofibroma, while rare, poses significant clinical challenges due to its potential for spinal cord compression and resultant neurological deficits. Timely diagnosis and tailored management strategies are pivotal in optimizing patient outcomes. In this case, a guarded, joint decision was made to take a conservative approach, with regular three-monthly monitoring to assess symptom progression and ensure timely intervention if warranted.

REFERENCES:

https://diagnosticpathology.biomedcentral.com/articles/10.1186/s13000-022-01263-y

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4533366/