

Conflicts of Interest/Disclosures

The authors declare that they have no financial or other conflicts of interest in relation to this research and its publication.

References

- [1] Li Y, Margraf J, Kluck B, et al. Thrombolytic therapy for ischemic stroke secondary to paradoxical embolism in pregnancy: a case report and literature review. *Neurologist* 2012;18:44–8.
- [2] Maaijwee NA, Rutten-Jacobs LC, Schaapsmeeders P, et al. Ischaemic stroke in young adults: risk factors and long-term consequences. *Nat Rev Neurol* 2014;10:315–25.
- [3] Udell JA, Opatowsky AR, Khairy P, et al. Patent foramen ovale closure vs medical therapy for stroke prevention: meta-analysis of randomized trials and review of heterogeneity in meta-analyses. *Can J Cardiol* 2014;30:1216–24.
- [4] Kernan WN, Ovbiagele B, Black HR, et al. Guidelines for the prevention of stroke in patients with stroke and transient ischemic attack: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke* 2014;45:2160–236.
- [5] Meek ME, Meek JC, Beheshti MV. Management of pulmonary arteriovenous malformations. *Semin Intervent Radiol* 2011;28:24–31.
- [6] Kimura K, Minematsu K, Nakajima M. Isolated pulmonary arteriovenous fistula without Rendu–Osler–Weber disease as a cause of cryptogenic stroke. *J Neurol Neurosurg Psychiatry* 2004;75:311–3.
- [7] Chessa M, Drago M, Krantunkov P, et al. Differential diagnosis between patent foramen ovale and pulmonary arteriovenous fistula in two patients with previous cryptogenic stroke caused by presumed paradoxical embolism. *J Am Soc Echocardiogr* 2002;15:845–6.

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A rare case of cervical facet joint and synovial cyst at C5/C6



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ABSTRACT

Lumbar synovial cysts are uncommon, and particularly rare at cervical levels. We report a 40-year-old woman who presented with pain distribution in the typical C6 dermatome. MRI revealed a right-sided large extradural cystic lesion adjacent to the C5/C6 facet joint that was hyperintense on T2-weighted MRI and hypointense on T1-weighted MRI. The patient underwent posterior cervical surgery at the C5/C6 level which involved posterior decompressive unilateral laminotomy and excision of the C5/C6 facet joint cyst. Following complete facetectomy of the right C5/C6 facet joint and exposure of the C6 nerve throughout its foraminal course, instrumented fusion was performed. Following the procedure, the patient had an uneventful recovery with relief of her radicular symptoms at follow-up clinical review.

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1. Introduction

A synovial cyst is an extrusion of the synovium through a capsular defect from a degenerate or unstable joint, lined by cuboid or pseudostratified columnar epithelium. Synovial cysts are typically found in extraspinal joints such as the knee, hip and elbow, but uncommonly in the spinal column. Symptomatic intraspinal synovial cysts are often located in the lumbar spine, and synovial cysts in the cervical region are particularly rare. The aetiology of lumbar and cervical facet joint cysts remains to be explained. Proposed theories include extrusion of synovial fluid through defects and tears in the facet capsule, myxoid degeneration, and cyst formation in collagen tissue. Extrusion of the synovium is further exacerbated by hypermobility or trauma, as well as inflammatory factors such as fibroblastic growth factor, substance P, platelet-derived growth factor, and interleukins.

The recommended approach for a cervical extradural facet cyst compressing the foramen and spinal cord and causing radiculopathy and/or myelopathy is surgical excision. Here, we report a symptomatic C5/C6 level cervical cyst compressing the C6 nerve that

was successfully managed with hemilaminectomy and instrumented fusion.

2. Case report

A 40-year-old woman presented with pain down the right arm, radiating into the thumb and index finger in a classic C6 distribution. She rated her pain as 9/10, which she had experienced intermittently for a number of years. She was a current smoker but did not have a history of traumatic episodes, and denied other medical issues.

Physical examination revealed reduced range of motion of the cervical spine secondary to pain. Clinical findings included a right C6 radiculopathy, with absent biceps reflex and sensory impairment in the C6 distribution. Her grip strength and elbow flexion were weak on the symptomatic side. Symmetrical tone and reflexes were noted in her lower limbs.

MRI revealed a right-sided large extradural cystic lesion adjacent to the C5/C6 facet joint that was hyperintense on T2-weighted MRI and hypointense in T1-weighted MRI (Fig. 1A, B). The lesion did not enhance with contrast injection. The mass was located in the posterolateral aspect of the extradural space, and caused marked compression of the exit foramen for the C6 nerve root. This was confirmed on CT scan (Fig. 1C, D).

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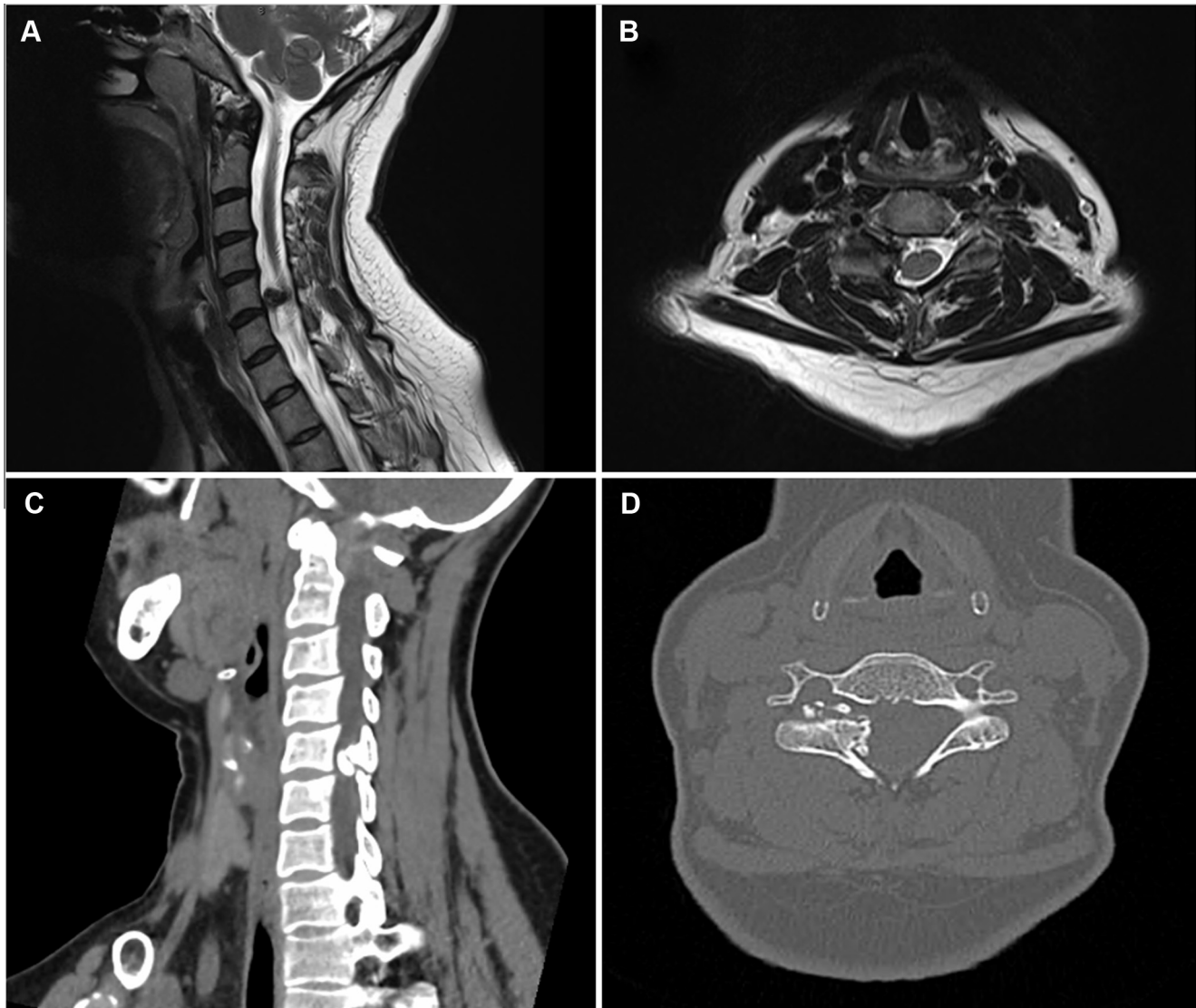


Fig. 1. (A) Sagittal T2-weighted MRI, (B) axial T1-weighted MRI, (C) sagittal CT scan, and (D) axial CT scan showing vertebral canal stenosis at C5/C6 secondary to facet/synovial cyst.

The patient underwent posterior cervical surgery at the C5/C6 level which involved posterior decompressive unilateral laminotomy and excision of the C5/C6 facet joint cyst. The laminotomy was performed using a 2 mm high speed round-burr to expose the ligamentum flavum. The exposure was enlarged using micro angled-curettes and 0.5 mm Kerrison rongeur. Intraoperative findings included a large and firmly adherent lesion attached to the lateral aspect of the midline dura and resulting in severe compression of the C6 nerve anteriorly and inferiorly. Piecemeal dissection and removal was performed to limit surgical trauma to the C6 nerve (Fig. 2A).

Following complete facetectomy of the right C5/C6 facet joint and exposure of the C6 nerve throughout its foraminal course (Fig. 2B), instrumented fusion was performed. An intraoperative decision was made to perform fusion (Fig. 3) due to complete facetectomy with likely significant instability of the motion segment. The C5 and C6 lateral mass and pedicle screw entry points were identified prior to removal of the facet cyst (Fig. 2). Fourteen mm OASYS (Stryker, Kalamazoo, MI, USA) lateral mass screws were then inserted and two rods were secured. Bone graft onlay was applied lateral to the screw heads. Following the procedure, the

patient had an uneventful recovery with relief of her radicular symptoms at follow-up clinical review.

3. Discussion

Synovial cysts are relatively uncommon cystic formations in the spine which can be asymptomatic and found incidentally. However, if synovial cysts grow into the spinal canal and/or foramen, and depending on their volume, site and relationship to surrounding bony and neural structures, they can be responsible for nerve root and spinal compression with radiculopathy and/or myelopathic symptoms [1]. Most symptomatic patients present with radicular pain (50–93%) [2,3] and neurogenic claudication (10–44%) [4,5]. Spinal nerve root compression was first reported in the literature in 1950 by Vosschulte and Borger [6], and since then the majority of spinal synovial cysts have been reported at the L4–L5 level, followed by L5–S1, L3–L4, and then L2–L3. Of the spinal extradural synovial cysts, occurrence in the cervical spine are extremely rare with only eight cases reported in the literature at the C5–C6 level at the time of writing. The first case of a cervical

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