Retrodental synovial cyst: MRI findings

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DESCRIPTION

Synovial cysts of the cervical spine are extremely rare. We describe a case concerning a 57-year-old woman who presented with uncertain cause of odontoid fracture, resulting in a cystic lesion compressing the upper cervical spinal cord. She had a history of neck pain and she had no history of head and neck trauma. There was no neurological deficit and no hyper-reflexia. Laboratory studies (including RA factor) were normal. Minimal invasive surgery of C1/C2 transarticular fusion was successfully performed. The patient was allowed to walk within 9 days after surgery.

After surgery, although significant improvement in pain and disability occurred, MRI showed an oval-shaped lesion, posterior to the odontoid process,

causing slight compression of the spinal cord. This mass was characterised by a low signal intensity on T1-weighted images and high signal intensity on T2-weighted images (figures 1 and 2). The most useful method for diagnosis was MRI.

Many theories have been proposed to explain what causes spinal synovial cysts.^{1,2} Synovial cysts generally arise at the facet joint capsule.² The atlantoaxial instability was so severe; therefore, stress at the C1–C2 facet joints might have produced the synovial cyst.

Synovial cysts as a result of spinal fracture are most common in the lumbar region, followed by the thoracic and then cervical region; cervical cysts are rare,³ but they should be considered in the differential diagnosis of an extradural mass of the upper cervical spine.

Figure 1 MRI demonstrating an oval-shaped cystic lesion at the anterior of the spinal canal at the atlanto-axial junction (white arrow): (A) sagittal T1-weighted image precontrast, (B) sagittal T2-weighted image and (C) axial fat saturated T2-weighted image.

Figure 2 Postcontrast fat saturated T1-weighted MRI showing a hypointense signal of the cyst (white arrow): (A) sagittal and (B) axial.

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Learning points

- ▶ Synovial cysts of the cervical spine are extremely rare.
- ▶ Degenerative intraspinal cysts may cause various neurological symptoms.
- ▶ These degenerative intraspinal cysts of the spine are usually diagnosed by MRI.

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Competing interests None.

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