A case of spinal arachnoid cyst

A 65-year-old female patient presented with a history of back pain and she reported a worsening of this pain in the past two years with a neurogenic bladder, spinal claudication and sensibility disturbances at the T4 level without there being a previous history of trauma.

Imaging Findings:

A 65-year-old female patient presented with a history of back pain and she reported a worsening of this pain in the past two years with a neurogenic bladder, spinal claudication and sensibility disturbances at the T4 level without there being a previous history of trauma. This patient was studied with conventional T1- and T2-weighted magnetic resonance imaging (MRI). The MRI examination demonstrated the presence of a spinal arachnoid cyst located at the T4–T6 level which was strictly contiguous to the spinal cord.

Discussion:

Spinal arachnoid cysts are known to be relatively uncommon lesions that may be either intra- or extradural. Intradural spinal arachnoid cysts are even less common. These cysts are usually asymptomatic but may produce symptoms by compressing the spinal cord or nerve roots suddenly or progressively. Arachnoid cysts represent approximately 1% of all intracranial masses and are relatively uncommon at the level of the spinal canal. In fact, they are usually located in the thoracic region (80%), as compared with 15% in the cervical spine and 5% in the lumbar spine. The problem presents in all age groups, but up to 75% are discovered in children. There is a 3:1 predominance in males. They may appear as a single or as multiple cysts. Its etiology is unclear; however, most spinal intradural cysts are thought to be congenital. Back pain is the most common onset symptom, followed by sensory changes, urinary dysfunction, and weakness. Changes in posture often cause variation of symptoms. CT myelography and MR imaging clearly demonstrate the presence and the exact location of the arachnoid cysts. Findings on CT myelography are basically divided into three groups: 1. Those in which there is the contrast filling of the cysts spontaneously and immediately after administration of the contrast media. In the case of a direct communication of the cyst with the CSF. 2. Those in which the cysts are isolated from the CSF circulation, thus presenting as filling defects. 3. Those in which the cysts show up as filling defects early after administration of the contrast media, but would then become filled with contrast if imaged later within 12–24 h. MRI has almost replaced myelography and CT myelography. Theoretically, MRI should be more accurate in detecting the pathology, especially in the sagittal views. MRI can also detect the presence of an associated syrinx, usually present as an upward cyst. The primary MRI finding suggestive of this disorder is a spinal space-occupying mass, with T1- and T2-weighted signals identical to CSF. When the cyst is located in the epidural space, the signal-intensity difference between the arachnoid cyst and the epidural fat is clearly shown on MRI. A widening of the posterior CSF space on MRI, with an anterior displacement and thinning of the spinal cord, may be the only sign of an intradural arachnoid
cyst. Surgery is the treatment of choice for an intradural arachnoid cyst, where a complete excision of the subarachnoid membrane is performed; other possibilities are wide fenestration of these membranes to allow a maximal communication with subarachnoid CSF space or, in the case of recurrence, despite aggressive excision and fenestration, shunting into the peritoneal or pleural cavity has been reported as being effective.

**Differential Diagnosis List:** Spinal arachnoid cyst.

**Final Diagnosis:** Spinal arachnoid cyst.

**References:**


Description: A sagittal T2-weighted MR image showing a widened posterior subarachnoid space, which appears isointense with the surrounding CSF and the concomitant thinning and anterior displacement of the spinal cord at the T4--T6 level. Origin:
Description: An axial T2-weighted MR image showing a hyperintense lesion in the posterior subarachnoid space causing a compression and anterior displacement of the spinal cord. Origin: