



Arachnoiditis Ossificans of the Lumbosacral Spine

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Arachnoiditis ossificans (AO) is a rare disorder that represents the end-stage progression of adhesive arachnoiditis. In contrast to the benign, age-related calcification of the meninges, ossification of the arachnoid leads to a clinical presentation consistent with spinal stenosis and may be associated with low back pain and lower extremity weakness (1). Given the symptomatology, magnetic resonance imaging (MRI) is frequently the first imaging modality performed; however, non-contrast-enhanced computed tomography (CT) offers the advantage of differentiating benign meningeal calcifications from frank meningeal ossification. These CT findings of a 56-year-old male, with a history of cervico-thoracic fusion, who presented with progressively worsening lumbar spine and bilateral leg pain over the past several years, demonstrate significant arachnoid ossification and canal stenosis (Figure 1). Although the underlying pathophysiology of AO remains to be elucidated, association has been indicated with an inciting event, such as prior spine surgery, intrathecal drug deposition, infection, and trauma, that leads to inflammatory changes in the arachnoid (2-5). MRI is an important modality used in the diagnosis of arachnoiditis; however, non-uniform enhancement of meningeal calcifications may lead to misdiagnosis. CT offers greater sensitivity than MRI for assessing the extent of ossification and for accordingly planning decompression or resection of isolated ossified plaques.

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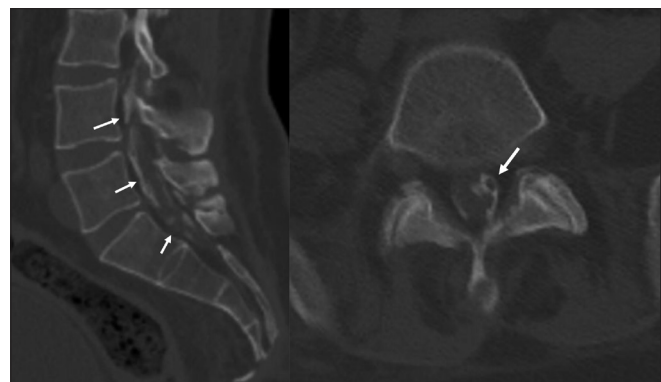


Figure 1. A sagittal non-contrast-enhanced computed tomography image demonstrates arachnoid ossification in the spinal canal extending from L3 to S3 (left). An axial image demonstrates approximately 33% canal stenosis as a result of the space-occupying meningeal calcifications (right)

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