Case Study 1

Cervical Spinal Canal Stenosis with Spondylotic Myelopathy

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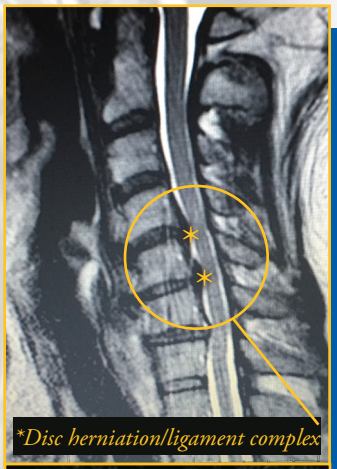
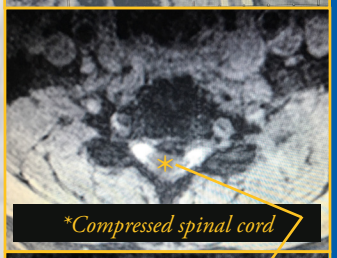
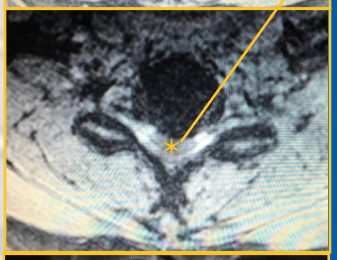
The patient is a 49-year-old male who presented with neck pain and pain extending out through his left upper extremity. He noticed his symptoms progressively worsening with numbness, tingling, and weakness in his arms to his hands. He had been treating these symptoms over the past few months with anti-inflammatory medications, extensive physical therapy, and modalities.

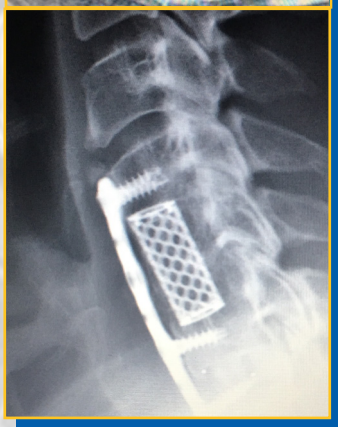


*Disc herniation/ligament complex



*Compressed spinal cord





Exam:

He presented with slight limitation of cervical range of motion and radiating pain and paresthesias down the left arm to the hand and digits. A positive Spurling's Test on the left and weakness of the biceps, triceps, and wrist extension/flexion 4/5, and right biceps 4/5.

His preoperative MRI demonstrated severe cervical spondylosis predominantly of the C4-7 segments with severe neuoroforaminal stenosis and large posterior disc herniations impacting the spinal cord and spondylotic myelopathy (increased T2 signal in the cord, due to extrinsic compression of the cord).

Hospital Course:

Due to the progressively worsening cervical radiculopathy and compression of the spinal cord the patient underwent surgical intervention involving a C5 corpectomy, C6-7 discectomy and bilateral neuroforaminotomies and stabilization with a titanium cage of the C5 segment and spacer at C6-7 with anterior cervical plating. Postoperatively the patient experienced excellent relief of his radicular pain and paresthesias with improving strength. The patient went home on postoperative day 1.

Follow Up:

At three months-postoperative he had regained full-motor strength and continued with complete resolution of radicular pain and paresthesias and stable fusion.

At four years postoperative he continues with full function and no symptoms and going about his regular work and recreational activities.

Discussion:

Radiculopathy due to severe neuroforaminal stenosis were this patient's primary symptoms. However, the presence of severe central canal stenosis with impact on the spinal cord and changes consistent with spondylotic myelopathy was very concerning. This condition can progress insidiously to a significant myelopathy because spinal cord compression and changes often do not produce painful symptoms. Subtle changes such as hyperreflexia, gait disturbances, and diminished coordination may delay attention until other symptoms present such as weakness, frequent falls and loss of function. Unfortunately, delayed presentations can result in compromised function and neurologic deficits. This patient was fortunate to present with predominantly painful radicular nerve symptoms associated with cervical nerve root impingement at the neuroforamen, and the cervical stenosis and spinal cord compression had not yet progressed to a significant myelopathy.

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