

A Case Report of Silent Cervical Spondylotic Myelopathy without Neck Pain

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Abstract

A 70-year-old African American woman presented to the pain management clinic with complaints of lower back pain and bilateral calf pain with weakness in her legs. The clinical impression was lumbar radiculopathy. MRI of the low back revealed disc bulges which could not explain all the weakness in her legs. Hoffman's sign was positive which prompted us to image the cervical spine which revealed cervical myelopathy. This case highlights the importance of silent cervical myelopathic presenting without neck pain, in patients with low back pain.

Keywords: Cervical, Myelopathy, Cord Compression, Painless, Weakness, Surgery, Pain Management

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Introduction

Cervical spondylotic myelopathy (CSM) is a compression of the spinal cord in the neck. CSM is the most common spinal cord problem in the United States for people ages 55 and older. The symptoms of CSM are most commonly attributed to stenosis from degenerative changes in the spine. This stenosis is due to the formation of osteophytes from vertebral bodies large enough to compress the spinal cord and compromise its structure. Individuals with significant spondylotic cord compression may have no symptoms. Furthermore, previous studies have suggested a multifactorial etiology including biochemical changes in the components of the intervertebral disc, bony osteophyte formation, and variable tolerances of spinal cord ischemia [1]. The most common symptoms include neck stiffness, arm pain, numbness in the hands and weakness of the arms and legs, stiff legs, difficulty using your hands or walking steadily, and loss of bladder or bowel control [2,3]. On physical examination upper motor neuron signs are present including hyperreflexia, clonus, spasticity, Lhermitte's phenomenon, up-going plantar response, and Hoffmann's sign [4]. The incidence and prevalence of myelopathy due to degeneration of the spine are estimated at a minimum of 41 and 605 per million in North America, respectively. Incidence of cervical spondylotic myelopathy-related hospitalizations has been estimated at 4.04/100,000 person-years, and surgical rates seem to be rising.

The incidence of neck pain cervical spondylotic myelopathy is also a very common presentation and patients that present without neck pain require more careful diagnoses and a more thorough evaluation.

Case Presentation

We present a 70-year-old female who complains of lower back pain and bilateral calf pain that started 5 months ago when the patient "got off the bus and the pain started suddenly". The symptoms are constant throughout the day located at the midline of her lower back, rated 8/10 for pain, aggravated with coughing or movement, and radiates to the midline. These symptoms are relieved by rest. She did not have any bowel or bladder incontinence. The patient has a 4-year history of NIDDM, hyperlipidemia, and hypertension. On examination, all cranial nerves were intact. Muscle reflexes were biceps, 3+ bilaterally; triceps, 3+ bilaterally; brachioradialis, 3+ bilaterally; and 2/4 throughout the lower extremities. Strength examination revealed 3/5 in bilateral upper extremities and 4/5 throughout the lower extremities. Upper motor neuron signs elicited were: a positive Hoffman's bilaterally and hyperreflexia bilaterally. Babinski sign was negative bilaterally. Sensory examination was intact throughout. The patient demonstrated very poor standing balance, poor standing posture, and ambulated with a noticeable limp while using a quad cane. On inspection of the cervical spine, there was normal curvature of the spine. Spurlings's sign was negative. Cervical facet tenderness was not noted. Lumbar spine exam did reveal lumbar facet tenderness and the Straight leg test was negative.

MRI imaging of the patient's C-Spine showed C3-C4 left central disc protrusion (disc herniation) causing cord deformity with associated cord edema and/or gliosis, C4-C5 broad right central disc protrusion (disc herniation) causing cord deformity, C5-C6 broad shallow right central disc protrusion (disc herniation) causing cord deformity, C6-C7 shallow central disc protrusion (disc herniation), and grade 1 to grade 2 degenerative anterior listhesis C7 on T1. The patient was referred to neurosurgery and underwent cervical decompression (**Figures 1 and 2**).

Discussion

Common causes of cervical myelopathy include old age. Among persons younger than 40 years, 25% have degenerative disk

disease (DDD), and 4% have foraminal stenosis. In persons older than 40 years, almost 60% have DDD, and 20% have foraminal stenosis, as confirmed with MRI. The role of trauma in spondylosis is controversial although repetitive, subclinical trauma probably influences the onset and rate of progression of spondylosis. Cervical spondylosis is significantly higher in patients who carry loads on their head than in those who do not [3]. The most common physical exam findings are: spurling sign-radicular pain is exacerbated by extension and lateral bending of the neck toward the side of the lesion, causing additional foraminal compromise; Lhermitte sign-this generalized electrical shock sensation is associated with neck extension; Hoffman sign-reflex contraction of the thumb and index finger occurs in response to nipping of the middle finger; this sign is evidence of an upper motor neuron lesion. A Hoffman sign may be insignificant if present bilaterally; Distal weakness; Decreased ROM in the cervical spine, especially with neck extension; Hand clumsiness; Loss of sensation; Increased reflexes in the lower extremities and in the upper extremities below the level of the lesion; A characteristically broad-based, stooped, and spastic gait; and Extensor planter reflex in severe myelopathy [5].

Nonsurgical care for patients with radiographic evidence of cervical stenosis without clinical signs or symptoms of myelopathy is a treatment option. This patient has failed physical therapy, NSAIDs and gabapentin for 6 weeks. Patients with mild clinical disease such as hyperreflexia or slight balance disturbance may be observed with close clinical and radiographic follow-up [6]. Surgical measures are preserved for cases in which conservative management fails. The decision for operative treatment of CSM must take into consideration the patient's age, baseline function, rate of deterioration, severity of symptoms, and overall health. It is generally agreed upon [those] patients with ongoing symptoms refractory to conservative measures, those with progressive symptoms, bowel or bladder dysfunction, or overt weakness should be considered for operative intervention [6-8].

Conclusion

This is case study of a patient with cervical spodylotic myelopathy without neck pain in a patient with low back pain. Cervical MRI revealed multiple disc herniation's causing cord malformations ranging from C3 to T1. Patient can present with low back pain with weakness in the legs. This case highlights the need to look for long tract signs of physical exam to explore possible causes of cervical myelopathy to account for weakness in the legs, which cannot be accounted by the low back alone.

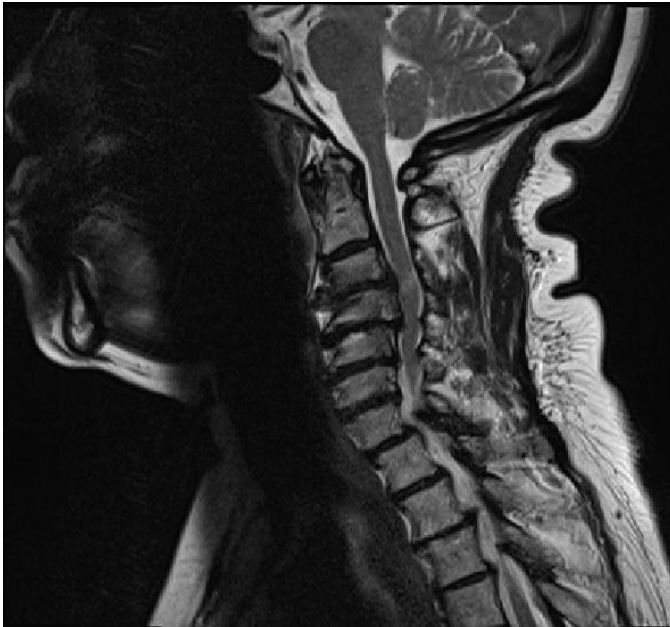


Figure 1 T2 Sagittal slide, **C3-C4**: Left central disc protrusion; **C3-C5**: Broad right central disc protrusion; **C5-C6**: Broad shallow central disc protrusion; **C6-C7**: Shallow central disc protrusion, grade 1 degenerative anterior listhesis **C7** on **T1**.

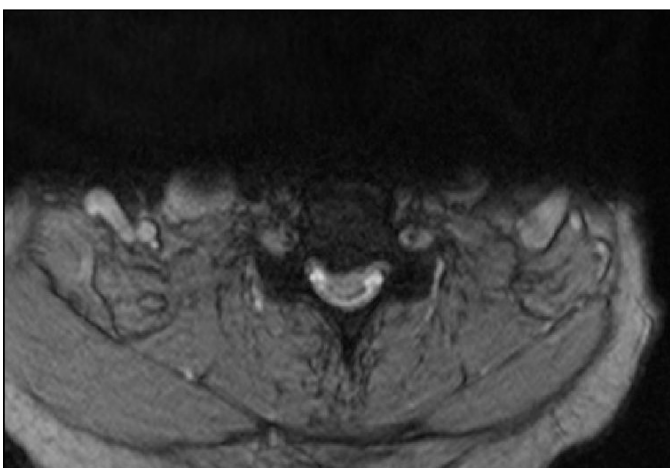


Figure 2 A T2 MED axial slide **C5-C6** broad shallow central disc protrusion causing cord deformity.

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