

Pain in the Back and Legs Caused by Cervical Spinal Cord Compression

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FROM ABSTRACT:

Cervical spinal cord compression by tumor or degenerated disk material can cause low back and leg pains which simulate the lumbar disk syndrome.

If the patient has roentgenographic evidence of both cervical and lumbar disk disease, the differential diagnosis can be difficult.

The pain caused by [cervical] cord compression tends to be diffuse, involves both legs, and is burning or aching in quality.

Lumbosacral nerve root compression produces a sharp, radiating pain in the distribution of the involved root.

The results of neurologic examination may be normal at a time when [cervical] cord compression is sufficient to produce severe pain.

The mechanical signs of lumbar disk herniation, limitation of back mobility, and a positive reaction to the straight leg raising test are absent with [cervical] cord compression.

THESE AUTHORS ALSO NOTE:

"The most common causes of spinal cord compression are degeneration of intervertebral disks with herniation of the nucleus pulposus into the spinal canal or the formation of osseofibrous ridges at the junction of the disk and the vertebral body."

The earliest symptoms of cervical spondylosis "may be sensory, in the form of numbness or paresthesias in the legs, or weakness of the legs due to involvement of the corticospinal tracts."

"Loss of control of bowel and bladder generally does not appear until late in the disease."

Patients with pains in the back and legs are commonly caused by cervical spondylosis and cervical spinal cord compression.

These authors present three case studies. Each patient complained of symptoms in the low back and legs, but the neurological examination of the lower extremities was normal; the cervical spine myelogram showed spinal cord compression; cervical spine decompressive surgery eliminated lower extremity symptoms.

These authors make the following observations pertaining to cervical myelopathy and lower extremity complaints:

- 1) Lumbar spine radiculopathy is usually a sharp and shooting pain with paresthesias in the distribution of the involved nerve root.
- 2) Cervical myelopathic leg pain is often described as aching or deep and boring.
- 3) A constant burning sensation in the lower extremities is very strong evidence of cervical myelopathy.
- 4) Although cervical myelopathic leg pain may be in one leg, it is usually bilateral and often symmetrical.
- 5) Cervical myelopathic patients do not complain of limitations in low back mobility.
- 6) Cervical myelopathic patients tend to not aggravate their back/leg symptoms with cough or sneeze.
- 7) Many cervical myelopathic patients will have night pain which awakens the patient and is relieved by getting out of bed.
- 8) Early cervical myelopathic motor symptoms include dragging one leg, difficulty climbing stairs, or sudden transient collapse of both lower extremities while walking.
- 9) In the cervical myelopathic patient, a positive Babinski sign "may be the earliest sign of cord compression."
- 10) The cervical myelopathic patient may have a hyperactive lower extremity deep tendon reflex.
- 11) The cervical myelopathic patient will not have a positive straight-leg-raise test for low back pain, will not have tenderness of the lumbar spinous processes, and will not have limitation of low back mobility; yet these signs are all common in patients with lumbar radiculopathy.

"The critical measurement of the spinal canal is the sagittal diameter, not the transverse, and congenital narrowing of the canal in the anteroposterior plane is a common finding." It is the "distance from the apex of a spondylotic ridge to the roof

of the spinal canal, and not the height of the ridge, which is the significant determinant of cord compression.”

“If the patient’s back and leg pains are improved by immobilization in a cervical collar and they return when the collar is removed, this is evidence that his symptoms are due to cervical spinal cord compression.”

KEY POINTS FROM DAN MURPHY

- 1) Cervical spinal cord compression by tumor or degenerated disk material can cause low back and leg pains.
- 2) The pain caused by [cervical] cord compression tends to be diffuse, involves both legs, and is burning or aching in quality.
- 3) Lumbosacral nerve root compression produces a sharp, radiating pain in the distribution of the involved root.
- 4) The results of neurologic examination may be normal at a time when [cervical] cord compression is sufficient to produce severe pain.
- 5) The mechanical signs of lumbar disk herniation, limitation of back mobility and a positive reaction to the straight leg raising test are absent with [cervical] cord compression.
- 6) “The most common causes of spinal cord compression are degeneration of intervertebral disks with herniation of the nucleus pulposus into the spinal canal or the formation of osseofibrous ridges at the junction of the disk and the vertebral body.”
- 7) The earliest symptoms of cervical spondylosis “may be sensory, in the form of numbness or paresthesias in the legs, or weakness of the legs due to involvement of the corticospinal tracts.”
- 8) Lumbar spine radiculopathy usually has sharp and shooting pain with paresthesias in the distribution of the involved nerve root.
- 9) Cervical myelopathic leg pain is often described as aching or deep and boring.
- 10) A constant burning sensation in the lower extremities is very strong evidence of cervical myelopathy.
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- 12) Cervical myelopathic patients tend to not aggravate their back/leg symptoms with cough or sneeze.

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- 14) Early cervical myelopathic motor symptoms include dragging one leg, difficulty climbing stairs, or sudden transient collapse of both lower extremities while walking.
- 15) In the cervical myelopathic patient, a positive Babinski sign "may be the earliest sign of cord compression."
- 16) The cervical myelopathic patient may have a hyperactive lower extremity deep tendon reflex.
- 17) The cervical myelopathic patient will not have a positive straight-leg-raise test for low back pain, will not have tenderness of the lumbar spinous processes, and will not have limitation of low back mobility; yet these signs are all common in patients with lumbar radiculopathy.
- 18) "The critical measurement of the spinal canal is the sagittal diameter, not the transverse, and congenital narrowing of the canal in the anteroposterior plane is a common finding." It is the "distance from the apex of a spondylotic ridge to the roof of the spinal canal, and not the height of the ridge, which is the significant determinant of cord compression."
- 19) "If the patient's back and leg pains are improved by immobilization in a cervical collar and they return when the collar is removed, this is evidence that his symptoms are due to cervical spinal cord compression."