

JD BARTLESON: Hello, I'm JD Bartleson, a neurologist at Mayo Clinic in Rochester, Minnesota. I spend about half of my time seeing spine patients in our spine center. Today I would like to talk to you about cervical spinal stenosis. By cervical spinal stenosis, we mean narrowing of the spinal canal in the neck. This occurs when there is overgrowth of bony spurs, bulging of disks, and thickening of ligaments. Cervical spinal stenosis is important because the cervical spinal cord runs through the neck, and this vital structure carries all sensory messages from below the neck to the brain, and sends all motor messages to the body through this same structure. Why is this an important condition to talk about? Because it's very common. It's estimated that over the age of 50 at least 5% of us will have significant cervical spinal stenosis that impinges on our spinal cord.

It's the most common cause of myelopathy, by myelopathy we mean spinal cord damage in adults. It's much more common than conditions like multiple sclerosis or acute traumatic spinal cord injury. How is it diagnosed? Magnetic resonance imaging, or MRI, is the diagnostic test of choice. MRI can tell us if there is narrowing stenosis, and it can also tell us if there is impingement on the spinal cord. But the MRI can't tell us if the spinal cord is working well or not. For that we have to rely on the patient to tell us about symptoms they may be having, such as weakness or clumsiness in their limbs, loss of sensation, pain in their neck or upper limb, or difficulty controlling their bowel or bladder. On examination we look for weakness, evidence of spasticity, and heightened reflexes.

Well how is cervical spinal stenosis treated? If the patient does have impingement on their spinal cord and signs and symptoms of spinal cord dysfunction, then surgery from the front of the neck or the back of the neck can be performed to relieve pressure on the spinal cord and restore lost function in 1/2 to 2/3 of patients, or at least keep them from getting worse. However, if the patient has cervical spinal stenosis and they do not have evidence of spinal cord dysfunction, they can be simply observed and advised to avoid head and neck injury. When I tell patients that I recommend that they avoid head and neck injury, they often laugh at me, but there are some specific things that I tell them that they can do to help reduce the risk of a spinal cord injury that might, on top of their cervical spinal stenosis, cause cervical spinal cord damage. These include safety proofing their home, using a nightlight for example, avoiding loose rugs, avoiding slippery surfaces or uneven surfaces in the home, wearing proper footwear, avoiding hazardous activities, such as downhill skiing or fast bicycle riding, avoiding going up on ladders, taking care with use of medications that might cause imbalance like sleeping pills or muscle relaxants, and being careful in their use of alcohol. I also tell them to drive a large car with plenty of air bags and drive defensively.

But what about prophylactic surgery for cervical spinal stenosis to prevent myelopathy? This is a common scenario that I see in our spine center at Mayo. Patient has neck pain and maybe they have intermittent or they have intermittent numbness and tingling on one or the other hand. This leads to an MRI, the MRI shows cervical spinal stenosis, this leads them to a spinal surgeon who recommends urgent spine surgery to prevent a spinal cord catastrophe. Patient then seeks out a second opinion in our spine center, we see them, we see the evidence of cervical spinal stenosis, but their symptoms don't suggest any problem with their spinal cord function, their examination is normal. In this setting we often recommend observation with avoidance of head and neck injury as I mentioned before. And we often see them at follow-up in 6 or 12 months. The data just doesn't support operating on cervical spinal stenosis in the absence of spinal cord injury. Thank you very much for your attention.