

Cervical Myelopathy

Pathology of the cervical spinal cord. Usually results from cord compression in the setting of spinal canal stenosis; ossification of ligaments, degenerative disc disease.

Prevalence: est. 605 people per million. More common with age. If you evaluate patients because of falls or imbalance, you will encounter myelopathy and should know (1) how to screen for it and (2) when to advocate for further workup.

Patients may report loss of dexterity of the upper extremities, and/or clumsy gait. They may report neck and/or shoulder pain.

Gait abnormality may be the first symptom observed. Look for:

- Abnormal (often narrowed, sometimes widened) Base of Support
- Apparent delayed initiation of swing phase
- Impaired foot clearance
- Frank staggering.



Examination should include focused testing of:
Sensation: light touch localization, proprioception
Strength: myotomal screening and serial MMT
Reflexes: including Achilles, Quadriceps, Brachioradialis

Coordination of the upper and lower extremities

Because the dorsal column is often affected, it is crucial to assess proprioception thoroughly. Use isolated joint testing, but also test Romberg, eyes closed finger-to-nose, and heel-to-shin tests.

Check for gastroc clonus. Ask about bowel/bladder changes. Look at shoe soles.

Grading Deep Tendon Reflexes

0	No response; always abnormal
1+	Slight but definitely present response; may or may not be normal
2+	Brisk response; normal
3+	Very brisk response; may or may not be normal
4+	Tap elicits repeating reflex (clonus); always abnormal

Cook's cluster can be used to help identify cervical myelopathy. A patient with 3 or more of the following findings is very likely (94% or greater) to have cervical myelopathy.

Cook's Myelopathy Cluster

1	Gait deviation
2	Positive Hoffman's
3	Inverted Supinator sign
4	Positive Babinski
5	Age > 45 years

Hoffman's is performed by flicking the nail bed of the patient's middle finger downward and watching for thumb adduction.

Inverted supinator sign is tested by tapping the Brachialis' distal tendon with arm slightly pronated. A positive test looks like finger flexion and/or elbow extension when you test the reflex.

Positive Babinski looks like toe extension and "fanning":



Absence of abnormal reflexes alone does not rule out myelopathy. When this entire cluster is performed appropriately, patients with ≤ 1 positive finding are unlikely to have cervical myelopathy.

MRI is used to identify myelomalacia. Thoracic MRI may include lower c-spine and extend to conus (usually L1-L2). Degenerative changes are more common at C5-C6 and C6-C7 levels.

Naturally, consider presence of UE symptoms to help localize level of suspected lesion.

Often treated with surgical decompression / fusion, though myelopathy is not always caused by compression.

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