Myelopathy

- Bacterial Pathogens and Antibiotic Resistance in Bloodstream Infections in Tunisia: A 13-Year Trend Analysis
- The Global Prevalence of and Factors Associated with Parasitic Coinfection in People Living with Viruses: A Systematic Review and Meta-Analysis
- Prognostic effect of body mass index in patients with acute leukemia undergoing allogeneic hematopoietic stem cell transplantation: A retrospective cohort study
- Osteoporotic bone marrow defect mimicking odontogenic cysts: report of 2 cases
- Analysis of retinal markers and incident amyotrophic lateral sclerosis: An optical coherence tomography-based cohort study
- The influence of hydrogel stiffness on axonal regeneration after spinal cord injury
- Ruxolitinib in Patients With Corticosteroid-Refractory or Corticosteroid-Dependent Chronic Graft-Versus-Host Disease: 3-Year Final Analysis of the Phase III REACH3 Study
- Perineural immune environment of olfactory nerves is reshaped by neuroinflammatory drainage and connects to ethmoid bone marrow

Myelopathy refers to any disorder or pathology affecting the spinal cord.

Classification

Etiology (Underlying Cause)

Traumatic Myelopathy: Caused by spinal cord injury due to trauma. When due to trauma, it is known as spinal cord injury. When inflammatory, it is known as myelitis. Disease that is vascular in nature is known as vascular myelopathy.

Compressive Myelopathy: Resulting from compression of the spinal cord, often due to conditions such as disc herniation, spinal stenosis, or tumors. Inflammatory or Infectious Myelopathy: Caused by inflammation or infection affecting the spinal cord, such as transverse myelitis or viral myelitis.

Vascular Myelopathy: Resulting from problems with blood supply to the spinal cord, often due to conditions like arteriovenous malformations or spinal cord infarction.

Location

Cervical Myelopathy: Affects the cervical (neck) region of the spinal cord.

Thoracic Myelopathy: Affects the thoracic (mid-back) region of the spinal cord. Lumbar Myelopathy: Affects the lumbar (lower back) region of the spinal cord.

Nature of the Disorder:

Symptomatic Myelopathy: Myelopathy with noticeable symptoms such as weakness, sensory changes, and motor dysfunction.

Asymptomatic Myelopathy: Myelopathy without apparent clinical symptoms but may be detected

through diagnostic imaging or other tests. Progression:

Acute Myelopathy: Rapid onset and progression of symptoms.

Chronic Myelopathy: Slow, gradual onset and progression of symptoms over time.

Specific Conditions:

Degenerative cervical myelopathy: Myelopathy caused by degenerative changes in the cervical spine. Transverse Myelopathy: Involves inflammation across the width of the spinal cord. Subacute Combined Degeneration of the Spinal Cord: Myelopathy associated with vitamin B12 deficiency.

Clinical features

Clinical signs and symptoms depend on which spinal cord level (cervical, thoracic or lumbar) is affected and the extent (anterior, posterior or lateral) of the pathology, and may include:

upper motor neuron signs (weakness, spasticity, clumsiness, altered tonus)

pathological hyperreflexia and inverted Plantar reflex (positive Babinski sign)

sensory deficits

bowel/bladder symptoms and sexual dysfunction.

Differential diagnosis

Differential diagnosis of chronic myelopathy is extensive.

The presence and severity of myelopathy can be evaluated by means of Transcranial Magnetic Stimulation (TMS), a neurophysiological method that allows the measurement of the time required for a neural impulse to cross the pyramidal tracts, starting from the cerebral cortex and ending at the anterior horn cells of the cervical, thoracic or lumbar spinal cord. This measurement is called Central Conduction Time (CCT). TMS can aid physicians to:

determine whether myelopathy exists identify the level of the spinal cord where myelopathy is located. This is especially useful in cases where more than two lesions may be responsible for the clinical symptoms and signs, such as in patients with two or more cervical disc hernias follow-up the progression of myelopathy in time, for example before and after cervical spine surgery TMS can also help in the differential diagnosis of different causes of pyramidal tract damage.

Differential diagnosis

Cervical spondylotic myelopathy

Chiari malformation

Tethered cord

Neurenteric cyst

Morquio syndrome

Hurler syndrome

Hereditary spastic paraplegia