

Module 2: Cervical Degeneration

Case presentation: *Cervical degeneration-assessment*

Participants should discuss the clinical assessment and natural history of patients presenting with cervical degeneration.

Lecture: *Cervical degeneration-assessment*

The natural history, symptoms, and examination findings associated with this process should be discussed.

The differential diagnosis of shoulder pathology, fibromyalgia, MS, etc, should also be addressed.

Nonoperative treatments, physical therapy, etc, and the evidence-based indications for surgical intervention and the influence of psychological issues and compensation should be discussed.

Discuss the social, emotional, and psychological factors that influence the presentation and course of symptomatic cervical degeneration.

Conclude the discussion with a brief summary of the key points and take-home messages.

Learning outcomes

- Describe the natural history of cervical degenerative disease
- Obtain a relevant history and perform a screening clinical examination for cervical degenerative disease
- Exclude or differentiate symptoms related to cervical degeneration from other non-spinal pathology

Lecture: *Radiological evaluation of cervical pathology*

Indications for and the interpretation of radiographic investigations should be discussed. Assessment of canal capacity, radiographic features of myelopathy, and instability should also be covered.

The place for and interpretation of EMG studies should be covered along with the use of injection procedures, such as epidural or facet injections, to diagnose and treat cervical pathology.

Conclude the discussion with a brief summary of the key points and take-home messages.

Learning outcomes

- Use and interpret appropriate diagnostic tools to assess cervical degenerative disease
- Outline the role and indications for the use of other diagnostic tools such as EMG and injections
- Correlate investigation findings with clinical features

Case presentation: *Cervical radiculopathy*

Participants should discuss the clinical presentation, symptoms, and examination of findings and assessment of patients presenting with cervical nerve root compression.

Lecture: *Cervical radiculopathy*

The lecture should cover the presenting features and natural history of this condition and the initial nonoperative treatments that can be used to control or manage symptoms.

The indications for and the interpretation of radiographic investigations (EMG, etc) should be discussed. Assessment of canal capacity, radiographic features of myelopathy and instability, and their influence on decision making regarding operative treatment should also be covered.

Conclude discussion with a brief summary of the key points and take-home messages.

Learning outcomes

- Identify patients with cervical nerve root or spinal cord compression due to localized cervical spine pathology—disc protrusions predominantly, but also spondylosis leading to foraminal stenosis
- Correlate diagnostic tests with clinical features
- Implement appropriate nonoperative treatments in the management of cervical nerve root compression
- Describe the natural history and indications for surgical intervention
- Outline the appropriate surgical procedures to manage this condition

Case presentation: *Cervical myelopathy*

Participants should discuss the clinical assessment of patients presenting with cervical myelopathy. The natural history, symptoms, and examination findings associated with this process should be discussed with an emphasis on identifying factors indicating a poor clinical outcome with ongoing nonoperative treatment.

Indications for and interpretation of radiographic investigations should be discussed. The identification of red flags, tumors, and instability should be covered along with the differential diagnosis of shoulder pathology, fibromyalgia, MS, etc. Influence of comorbidities (such as rheumatoid disease, diabetes, osteoporosis, and respiratory and cardiac disease) on the management of this condition should also be discussed.

Lecture: *Cervical myelopathy*

The evidence-based indications for surgical intervention should be discussed along with surgical options and provide guidelines for anterior vs posterior surgery without being prescriptive.

Discuss possible complications of treatment, such as C5 nerve root palsy with laminoplasty, nonunion, and implant failure.

The introduction of different scenarios, eg, gradual onset of myelopathy with stenosis and signal change on MRI and a case of myelopathy in a patient with rheumatoid arthritis and osteoporosis and/or OPLL, could be undertaken during the case discussion at the end of the day.

Conclude the discussion with a brief summary of the key points and take-home messages.

Learning outcomes

- Describe the natural history of cervical myelopathy and the indications for surgical intervention
- Outline the principles for surgical intervention, surgical options, and possible complications

Discussion

Review relevant points and discuss topics identified during discussion that warrant further emphasis or clarification.