

Module 5: Lumbar Degeneration

Case presentation: *Lumbar degeneration— assessment*

Participants should discuss the clinical assessment of patients presenting with back pain with or without features of neurological compromise, the indications for imaging and other investigations, and the natural history of acute and chronic degenerate back pain in the absence of neurological compromise or demonstrable instability. Participants should also understand nonoperative treatments such as core stabilization and the use of both therapeutic and diagnostic injection procedures.

Mention the relevance of psychological issues, depression, and compensation in relation to outcomes.

Participants should also be aware of the differential diagnosis of low back, buttock, and leg pain such as hip and sacroiliac pain and be able to identify “red flags” such as infection, tumors, and features of cauda equina compromise.

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

Learning outcomes

- Describe the natural history of lumbar degenerative disease
- Obtain a relevant history and perform a screening clinical examination for lumbar degenerative disease
- Outline the role and interpretation of investigations used to assess degenerative conditions of the lumbar spine
- Exclude or differentiate symptoms related to lumbar degeneration from other nonspinal pathology (hip, SI joint, knee, etc)
- Initiate appropriate nonoperative interventions in the management of symptoms related to lumbar degeneration
- Outline the evidence regarding the surgical treatment of degenerative disease of the lumbar spine in the absence of instability or neural compromise
- Identify patients with significant psychological issues
- Recognize the importance of a multidisciplinary approach to the management of chronic pain

Case presentation: *Lumbar radiculopathy*

Participants should discuss the clinical assessment of patients presenting with sciatica due to focal nerve root compression. They should discuss the natural history, nonoperative treatments and injections, and appropriate investigations.

Participants should also have an understanding of the surgical treatment of this condition, the surgical approach, outcomes, and common complications.

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

Learning outcomes

- Describe the natural history of sciatica due to disc herniation
- Request and interpret appropriate radiographic investigations
- Outline the evidence regarding the surgical treatment of disc herniation and relevant complications (recurrence, back pain, discitis)
- Outline the appropriate surgical management of these patients, including timing and type of surgery

Case presentation: *Lumbar spinal canal stenosis*

Participants should discuss the clinical assessment of patients presenting with symptoms of canal stenosis. Participants should discuss the natural history, nonoperative treatments and injections, appropriate investigations, and the evidence-based indications for surgical intervention.

Participants should also be able to differentiate spinal stenosis from vascular claudication, diabetes, SI joint, hip, and knee pathology, and degenerative back pain in the absence of neural compromise.

They should also have an understanding of the surgical treatment of this condition, the surgical approach, outcomes, and common complications.

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

Learning outcomes

- Describe the natural history of lumbar spinal canal stenosis
- Request and interpret appropriate radiographic investigations
- Discuss the evidence regarding the surgical treatment of lumbar canal stenosis in the absence of instability by decompression alone
- Outline the appropriate surgical management of these patients, including timing and type of surgery
- Identify and manage common complications such as dural tear, epidural hematoma, iatrogenic instability, and aggravation of degenerative back pain

Case presentation: *Lumbar degenerative spondylolisthesis*

Participants should discuss the clinical assessment of patients presenting with symptoms of canal stenosis in association with mechanical instability. They should discuss the natural history, nonoperative treatments and injections, appropriate investigations, and the evidence-based indications for surgical intervention.

Here the focus should be on identifying factors indicating clinical and radiographic features of instability of the spine and the need for fusion/stabilization in association with decompression.

They should also have an understanding of the surgical treatment options for this condition, the risk and benefits of the use of instrumentation, and the surgical options without being prescriptive. This should include a discussion of the outcomes and common complications.

Also consider indications for DVT prophylaxis in patients undergoing spinal surgery.

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

Learning outcomes

- Identify the clinical and radiographic features of instability in patients presenting with lumbar spinal canal stenosis
- Discuss the evidence in relation to this treatment
- Outline the surgical techniques appropriate to manage this condition
- Identify and manage common complications relating to the management of this condition

Case presentation: *Lumbar spondylolisthesis*

Participants should discuss the clinical assessment of patients presenting with symptoms of spondylolisthesis. They should discuss the incidence, natural history, nonoperative treatments and injections, appropriate investigations, and the evidence-based indications for surgical intervention.

Participants should also have an understanding of the surgical treatment of this condition, the objectives in relation to decompression of neural elements, restoring sagittal balance over reduction of the slip, and achieving a solid fusion.

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

Learning outcomes

- Identify the clinical and radiographic features of a lytic spondylolisthesis
- Discuss the evidence in relation to the surgical treatment of this condition
- Describe the surgical techniques appropriate to manage low-grade spondylolisthesis
- Discuss the treatment options for high-grade spondylolisthesis
- Identify and manage common complications relating to the management of this condition