Lumbar facet joint degeneration

- Lumbar Radiofrequency Ablation (LRFA)- Myths and Facts: A Narrative Review of the Literature
- The hidden asymmetry: facet joint tropism as a clue to spinal malalignment and muscle degeneration in adult spinal deformity
- Opioid Dose Reduction Vis-a-Vis Lumbar Medial Branch Intervention
- Correlation between Calcification of Facet Joint Capsule and Dynamic Instability in Lumbar Degenerative Spondylolisthesis
- The effectiveness of fluoroscopically guided lumbar facet steroid joint injections: A systematic review
- MRI reveals scoliosis as a silent driver of lumbar facet joint degeneration in aging Ecuadorian adults
- Focal fatty infiltration of the lumbar intervertebral disc: a case report and literature review
- The Future of Motion Preservation and Arthroplasty in the Degenerative Lumbar Spine

Is a source of chronic low back pain, with an incidence of 15% to 45% among patients with low back pain.

Facet joint degeneration, a real joint-segment-joint degeneration, is often a trigger of back pain. In addition, disc herniation, recess, or neuroforaminal stenosis often affects the nerve root and can lead to leg pain

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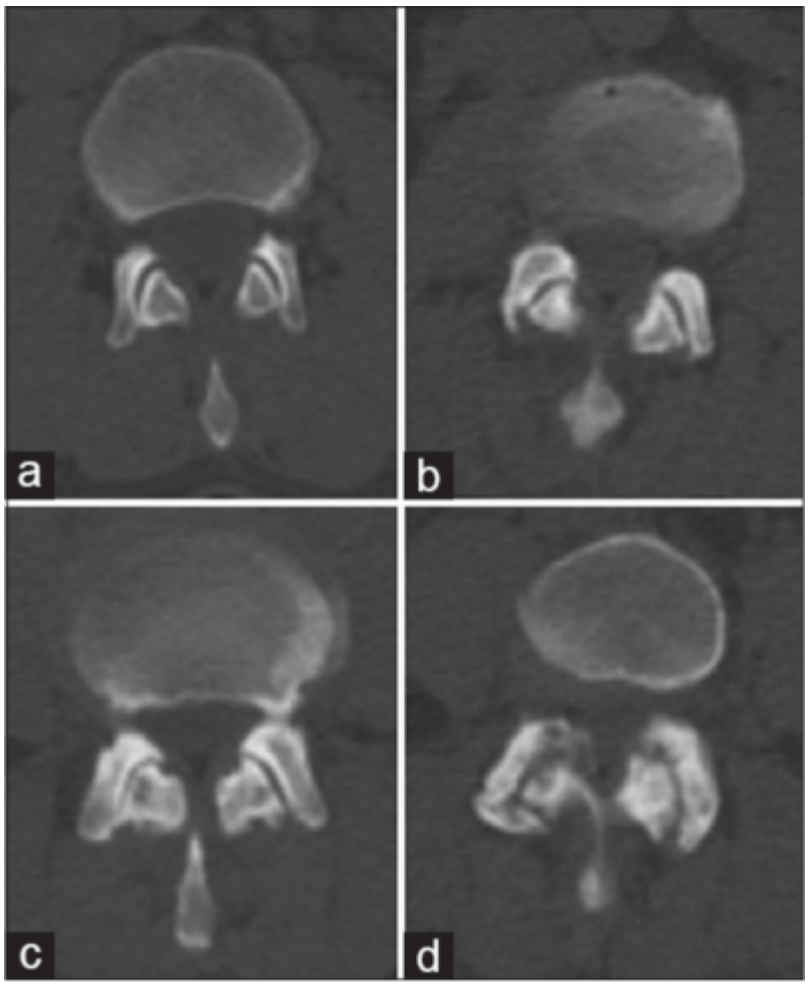
Age and BMI have a direct impact on facet joint degeneration. However, spinopelvic parameters influence the severity of facet joint degeneration rather than its occurrence. In addition to the effects of lumbar lordosis as a single entity, it is essential to consider separately the effects of proximal and distal lumbar lordosis at the facet joint degeneration level [1)]



Computed tomography Criteria for grading facet joint arthropathy (a) Normal facet joints (joint space 2-4 mm) (b) joint space narrowing (joint space <2 mm) and/or small osteophytes and/or mild hypertrophy of the articular processes joint space narrowing and/or moderate osteophytes and/ or moderate hypertrophy of the articular processes and/or mild subarticular bone erosions (d). Joint space narrowing and/or large osteophytes and/or severe hypertrophy of the articular processes and/or severe subarticular bone erosions and/or subchondral cysts [2)]

Various therapeutic techniques in the treatment of facet-related pain have been described in the literature:

Intraarticular lumbar facet joint steroid injections

Lumbar facet joint denervation

Arthroplasty is a surgical treatment option that aims to relieve pain while maintaining or restoring motion.

The FENIX ™ facet resurfacing technique might be considered in the future as surgical treatment of well selected patients suffering from chronic low back pain due to facet joint osteoarthritis. A modification of the superior implant should provide an initial firm fixation preventing implant dislocation [3)].

Epidemiology

Prevalence

General Population:

LFJD is a significant contributor to chronic low back pain (LBP), implicated in approximately 15-45% of LBP cases. Prevalence increases with age due to wear-and-tear of the joints.

Age and Gender:

It is more common in individuals over the age of 60 years. Men and women are equally affected, although some studies suggest a slightly higher prevalence in women due to differences in spinal anatomy and hormonal factors.

Imaging-Based Studies:

Radiographic evidence of lumbar facet joint osteoarthritis (OA) is present in 40-85% of people aged over 65, even if asymptomatic. MRI and CT scans often show evidence of degeneration, particularly at L4-L5 and L5-S1, which are the most mobile segments of the lumbar spine.

Classification

A fundamental consensus has been established regarding the classification of degeneration of lumbar intervertebral facet joints through MRI and CT scans, particularly using the Weishaupt and Pathria classification [4)]

Liu et al. propose a new grading system for lumbar facet joint degeneration based on X-rays, which serves as a supplement to the Weishaupt and Pathria classifications. This grading system aims to provide clinicians with a more comprehensive understanding of lumbar facet joint degeneration, allowing for the use of a broader range of diagnostic tools to evaluate facet joint degeneration from multiple perspectives. They believe that this grading system can be valuable in assessing potential anatomical changes related to the facet joint, thereby informing modifications to surgical techniques and procedural steps [5)].

Clinical features

see Lumbar facet joint syndrome.

Diagnosis

Lumbar facet joint syndrome diagnosis.

Treatment

Lumbar facet joint degeneration treatment.

1)
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2)
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3)
Van de Kelft E. Lumbar Facet Resurfacing: First Experience With the FENIX™ Implant. J Spinal Disord Tech. 2013 Nov 5. [Epub ahead of print] PubMed PMID: 23563335.
4)
Weishaupt D, Zanetti M, Boos N, Hodler J. MR imaging and CT in osteoarthritis of the lumbar facet joints. Skeletal Radiol. 1999 Apr;28(4):215-9. doi: 10.1007/s002560050503. PMID: 10384992.
5)
Liu X, Zhu Z, He S, Sun M, Zhao T, Liu L, Shi H, Hou Y, Shi G. Enhancing Clinical Insights: New Radiographic Grading for Lumbar Facet Joint Degeneration, A Reliability Study. JOR Spine. 2025 Jan 7;8(1):e70035. doi: 10.1002/jsp2.70035. PMID: 39781088; PMCID: PMC11705393.