

Lumbar juxtafacet cyst diagnosis

Identifying a [juxtafacet cyst](#) pre-op helps the surgeon, as the approach differs slightly from that for [lumbar disc herniation](#), and the cyst might otherwise be missed or unknowingly deflated and unnecessary time wasted afterwards trying to find a compressive lesion. Or, the unwitting surgeon may misinterpret the cyst as a “trans- dural disc extrusion” and needlessly open the dura. Pre-op diagnoses were incorrect in 30% of operated cases of JFC ¹⁾.

Myelography: posterolateral filling defect (whereas most discs are situated anteriorly, an occasional fragment may migrate posterolaterally, whereas a JFC will always be posterolateral), often with a round extradural appearance.

CT scan: shows a low density epidural cystic lesion typically with a posterolateral juxtaarticular location. Some have a calcified rim, ²⁾ and some may have gas within. ³⁾ Erosion of bony lamina is occasionally seen ^{4) 5)}.

Lumbar juxtafacet cyst MRI

Lumbar facet cysts are most common at the L4-L5 level and often are associated with spondylosis and degenerative spondylolisthesis. Advanced imaging studies have increased diagnosis of the cysts ⁶⁾.

Characteristic findings on magnetic resonance imaging obviate the need for any additional radiological studies ⁷⁾.

The detection rate of JFC improves with increasing lordosis of the spine and under weight-bearing conditions, particularly when standing. Unstable slipping or increased angular movement affects the size of JFC ⁸⁾.

Intraspinal synovial or ganglion cysts are uncommon lesions associated with degenerative lumbosacral spine disease. CT usually reveals cystic lesions adjacent to a facet joint, and they may show calcification. MR imaging of four surgically confirmed cases of intraspinal synovial cysts revealed subtle signal changes compared with CSF. Short TR/TE images showed the lesions to be slightly hyperintense in three cases and isointense in one case. Long TR/TE sequences revealed a hyperintense appearance in two cases and a hypointense appearance in the others. A peripheral rim of decreased signal on long TR/TE images probably reflects fine calcification or hemorrhage in the margins of the cysts. The multiplanar and contrast characteristics of MR make this technique well suited to the diagnosis of herniated disk, degenerative facet disease, and synovial cyst ⁹⁾.

Radiographic features

CT

Typically seen as a calcified cystic lesion adjacent to a facet joint.

CT may also show adjacent facet joint arthropathy +/- presence of gas.

References

1)

Sabo RA, Tracy PT, Weinger JM. A Series of 60 Juxtafacet Cysts: Clinical Presentation, the Role of Spinal Instability, and Treatment. *J Neurosurg.* 1996; 85:560–565

2)

Hemminghytt S, Daniels DL, Williams ML, et al. Intraspinal Synovial Cysts: Natural History and Diagnosis by CT. *Radiology.* 1982; 145:375–376

3)

Schulz EE, West WL, Hinshaw DB, et al. Gas in a Lumbar Extradural Juxtaarticular Cyst: Sign of Synovial Origin. *Am J Radiol.* 1984; 143:875–876

4)

Gorey MT, Hyman RA, Black KS, et al. Lumbar Synovial Cysts Eroding Bone. *AJNR.* 1992; 13:161–163

5)

Munz M, Tampieri D, Robitaille Y, et al. Spinal Synovial Cyst: Case Report Using Magnetic Resonance Imaging. *Surg Neurol.* 1990; 34:431–434

6)

Boody BS, Savage JW. Evaluation and Treatment of Lumbar Facet Cysts. *J Am Acad Orthop Surg.* 2016 Dec;24(12):829-842. PubMed PMID: 27792054.

7)

Heary RF, Stellar S, Fobben ES. Preoperative diagnosis of an extradural cyst arising from a spinal facet joint: case report. *Neurosurgery.* 1992 Mar;30(3):415-8. Review. PubMed PMID: 1535693.

8)

Niggemann P, Kuchta J, Hoeffler J, Grosskurth D, Beyer HK, Delank KS. Juxtafacet cysts of the lumbar spine: a positional MRI study. *Skeletal Radiol.* 2012 Mar;41(3):313-20. doi: 10.1007/s00256-011-1186-3. Epub 2011 May 11. PubMed PMID: 21560008.

9)

Liu SS, Williams KD, Drayer BP, Spetzler RF, Sonntag VK. Synovial cysts of the lumbosacral spine: diagnosis by MR imaging. *AJNR Am J Neuroradiol.* 1989 Nov-Dec;10(6):1239-42. PubMed PMID: 2512789.

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