Lumbar juxtafacet cyst differential diagnosis

Differentiating JFC from other masses relies largely on the appearance and location. Other distinguishing features include:

1. neurofibroma: unlikely to be calcified

2. free fragment of HLD: not cystic in appearance

3. epidural or nerve root metastases: not cystic

4. dural subarachnoid root sleeve dilatation

5. arachnoid cyst (from arachnoid herniation through a dural defect): not associated with facet joint, margins thinner than JFC [1)]

6. perineural cysts (Tarlov's cyst): arise in space between perineurium and endoneurium, usually on sacral roots [2)], occasionally show delayed filling on myelography. Usually associated with remodeling of adjacent bone

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Juxtafacet cysts (synovial cyst and ganglion cysts) are adjacent to a spinal facet joint or arising from the ligamentum flavum.

Distinction of these types is difficult without histology and is clinically unimportant [3)].

Contradictions in the terminology applied to lumbar juxtafacet cysts arise from the frequent sparsity of synovial lining cells, which has led to synovial cysts often being called "ganglion cysts" despite lacking confirmatory pathology.

Cysts having an extensive or meagre synovial cell lining are common in the ligamentum flavum of patients with symptomatic lateral or central stenosis. The cysts communicate with the facet joint by a bursa-type channel within the ligamentum flavum. Advanced osteoarthritis of the facet joint causes the liberation of fragments of cartilage and bone into the synovial fluid of the joint space. This enables some fragments to escape from the joint into the channel and become lodged within its wall where they provoke granulation tissue and scar formation. The tissue response to articular debris may block the synovial-lined channel to cause synovial cyst formation [4)].

1)
Budris DM. Intraspinal Lumbar Synovial Cyst. Orthopedics. 1991; 14:618–620
2)
Tarlov IM. Spinal Perineurial and Meningeal Cysts. J Neurol Neurosurg Psychiatry. 1970; 33:833–843
3)
Freidberg SR, Fellows T, Thomas CB, Mancall AC. Experience with symptomatic spinal epidural cysts. Neurosurgery. 1994 Jun;34(6):989-93; discussion 993. PubMed PMID: 8084409.
4)
Wilby MJ, Fraser RD, Vernon-Roberts B, Moore RJ. The prevalence and pathogenesis of synovial cysts within the ligamentum flavum in patients with lumbar spinal stenosis and radiculopathy. Spine (Phila Pa 1976). 2009 Nov 1;34(23):2518-24. doi: 10.1097/BRS.0b013e3181b22bd0. PubMed PMID: 19927101.