discography

Low back pain is one of the most common diseases, however the etiology of low back remains one of the most complex problems. Conventional imaging modalities such as plane radiography, CT and MRI are effective and in many cases sufficient diagnostic modalities. These modalities are however only morphologic. Discography with " memory pain test " is the only method that permits physiopathological and morphologic exploration of low back pain. Therefore discogrophy has a useful but limited place in the exploration of low back pain.

1) indications contraindications

Indications

- Clinical signs of radiculopathy with inconsistent.
- Negative or equivocal CT, MR or myelogram findings
- Before PLDD

Contraindications

- Discography is an invasive technique and must not be used as a screening tool.
- Nerve paralysis due to disk herniation.
- Hemorrhagic diathesis.
- Local infection of cutaneous or subcutaneous or muscular layers.

2) material

- 22-gauge needle, 1
- 2.5 to 20 cm long 18-gauge,
- 9.5 cm needle in lumbar level
- Local anesthesia lidocaine 1%
- Contrast medium (omnipaque 180)
- 5-ml syringe and sterile connecting tube
- Iodine, sterile drapes

3) technique

Discography Puncture Technique

The procedure is started with sterile preparation with aseptics (Iodine) of the skin. The skin's subcutaneous, lumbar muscles are infiltrated by local anethesia (1% lidocaine) with a 22-gauges 9 cm long needle. The position of the 22-gauge needle is checked by fluoroscopy and CT.

- For cervical level : The patient is placed in supine position, head slightly turned and in hyperextension. The entry point and the pathway are determined by CT. After local anesthesia of the skin, a 22-gauge 9.5 to 12.5 cm spinal needle is placed by an antero-lateral approach in the center of the disk under dual CT and fluoroscopy control. Under precise CT control the puncture of the carotid is avoided.
- For lumbar level : The patient is placed in prone position. The entry point and the pathway are determined by CT. The skin's subcutaneous layer and lumbar muscles are infiltrated by local anethesia (1% lidocaine) with a 22-gauge 9 cm long needle. The tip of the 18-gauge needle is placed to reach the articular process, the position of the needle is checked by fluoroscopy and CT. The stylet of this needle is then removed and a 22-gauge 20 cm needle is inserted into the 18-gauge needle. The tip of the 22-gauge spinal needle is placed in center of the disk. The position of the needle is checked by fluoroscopy and CT. Contrast agent injection and memory pain test
- 1 to 2 ml of contrast agent are injected for lumbar level ; 0.3 to 0.5 for cervical level. The patient is asked to describe the pain reproduction and radiation during injection. Memory pain is positive if injection reproduces his leg or back pain.

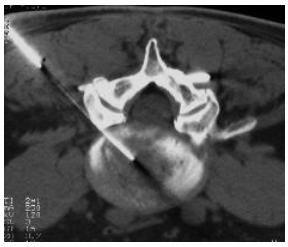
4) complications

Complications of discography are rare :

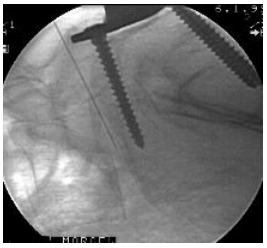
- The major complication of discography is septic discitis. To avoid this complication, severe sterility during the intervention is mandatory.
- No complications were observed among our patients.

5) Cases

Case 1: Discography at lumbar L4-L5 level. Pain provocation test negative.

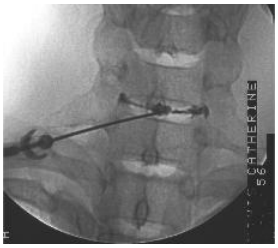


Discography: fluoroscopy control, disk puncture



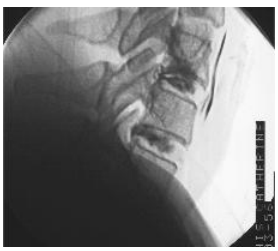
Discography: CT control, disk puncture

Case 2 Discography at cervical c6-c7 and c5-c6 levels.



Discography: fluoroscopy control

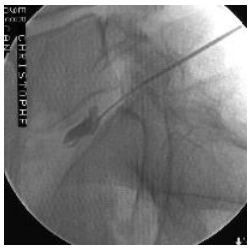
Discography: fluoroscopy control



Discography: fluoroscopy control

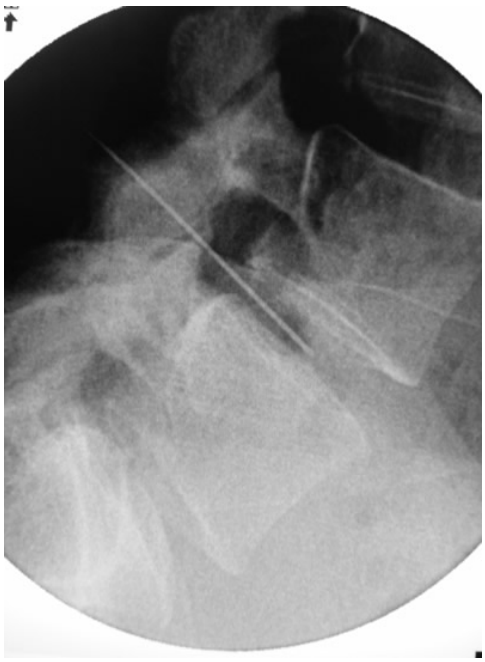
Case 3 Discography at lumbar L5-S1 level. Pain provocation test negative.

Discography: CT control disk puncture

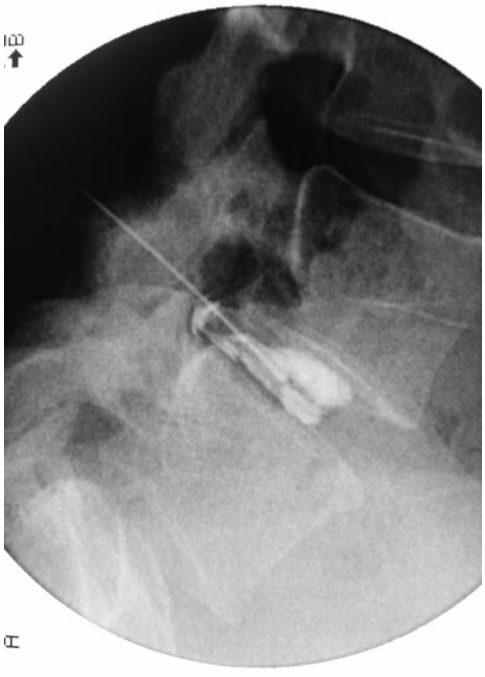


Discography: fluoroscopy control, disk puncture

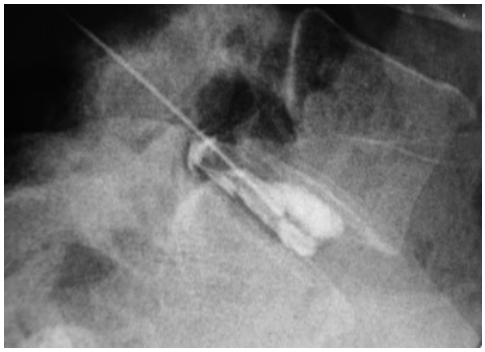
Case 4 : L4-L5 discography



Discography, disk puncture, fluoroscopy control.



Discography with annular tear.



Discography with annular tear.

Discography. Posterior radial annular tear in protruded disk.

AP projection.

Discography, CT control. Posterior annular tear.