L5-S1 disc herniation treatment

see Lumbar disc herniation treatment.

L5-S1 discectomy

L5-S1 discectomy

Percutaneous Endoscopic Lumbar Discectomy

A novel technique for C-arm free transtubular L5 nerve decompression under CT-based navigation to reduce the radiation hazard. This procedure is performed under general anesthesia and neuromonitoring. The patient is placed in a prone position on an operating carbon table. A navigation reference frame is placed percutaneously into the contralateral sacroiliac joint or spinous process. Then, CT scan images are obtained. After instrument registration, the L5-S1 foraminal level is confirmed with a navigated probe, and the entry point is marked. Using an approximately 2 cm skin incision, the subcutaneous tissue and muscles are dissected. The navigated first dilator is aimed at the L5-S1 Kambin's triangle, and sequential dilation is performed. The 18 mm tube is used and fixed to the frame. The bone around the Kambin's triangle is removed with a navigated burr. For lateral disc herniation, the L5 nerve root is identified and retracted, and the disc fragment is removed. The navigation-guided tubular endoscopic decompression is an effective procedure. There is no radiation hazard to the surgeon or the operating room staff [1].

The treatment of L5 - S1 intervertebral disc herniation with PPFED by grafting tubes at various positions via an interlaminar approach is a safe, effective, and minimally invasive surgical method. Reaching the location of a disc herniation directly through the natural gap in the bones can maximally avoid collateral injury from spine surgery [2].

1)
Tanaka M, Arataki S, Mehta R, Tsai TT, Fujiwara Y, Uotani K, Yamauchi T. Transtubular Endoscopic Posterolateral Decompression for L5-S1 Lumbar Lateral Disc Herniation. J Vis Exp. 2022 Oct 14;(188). doi: 10.3791/63603. PMID: 36314789.
2)
Kong W, Chen T, Ye S, Wu F, Song Y. Treatment of L5 - S1 intervertebral disc herniation with posterior percutaneous full-endoscopic discectomy by grafting tubes at various positions via an interlaminar approach. BMC Surg. 2019 Aug 28;19(1):124. doi: 10.1186/s12893-019-0589-2. PMID: 31462257; PMCID: PMC6714091.