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Introduction

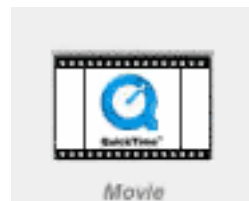
Revision lumbar discectomy is a difficult clinical entity to treat. Historically, complication rates are far higher than first time microdiscectomy resulting in significant morbidity and increased health care costs. Previous reports show minimally invasive tubular discectomy (MITD) to be an equivalent treatment when compared with traditional approaches and previous authors suggest MITD may prove the preferred technique in experienced hands.

Methods

Over an eight year period the senior author performed minimally invasive tubular discectomies on 50 patients with single level lumbar recurrent disc herniations. Surgical technique, outcome, and complication rate are reported and compared to similar patient series in the literature. One case is reviewed and the technique is described in detail.

Results

Average age for the patient population was 50.5 years and ranged from 22-82. There were 29 male and 21 female patients. Post operative patient visit data revealed good to excellent outcomes sustained over time. There were no post operative complications, including dural tears or post-operative wound infections. This is below any reported series of this size to date.



Surgical Technique

In a standard one level revision discectomy the patient is positioned prone and is prepped and draped in the usual fashion. The fluoroscope is draped and included for use intraoperatively. The approach is from the ipsilateral side of the disc herniation and clinical symptoms. If the prior discectomy was through a tubular retractor the same incision is used. The incision should be 1.5cm off the midline and approximately 2cm in length. Local anesthetic is injected and a #15 blade is used to incise the skin and lumbar fascia. A k-wire is passed and firmly planted on the ipsilateral facet joint of the level of interest and a series of tubular dilators are passed. Care must be taken at this stage as a laminotomy defect is usually present and the thecal sac is vulnerable to injury. An 18mm working channel is inserted and secured and the microscope is brought into the field. The facet joint is exposed with monopolar cautery after the medial bony edge is palpated. A straight curette is preferable to sharply dissect the scar tissue from the remnants of the medial facet and the thecal sac is safely exposed. Once the dura and nerve root are identified the discectomy is performed using standard microsurgical technique. If appropriate additional bone may be removed with a Kerrison rongeur and the nerve root followed in a lateral and caudal direction, completing a foraminotomy. The fascia and skin are then closed in the usual fashion.

Conclusions

Microscopic minimally invasive tubular discectomy can be safely performed for revision discectomies with low morbidity. Using a paramedian approach helps to decrease the exposure to pre-existing scar tissue and offers significant advantage over the traditional midline approach to treat recurrent disc herniations.

References

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