

Percutaneous Posterolateral Transforminal Endoscopic Discectomy:

Clinical Outcome, Complications and Learning Curve Evaluation.

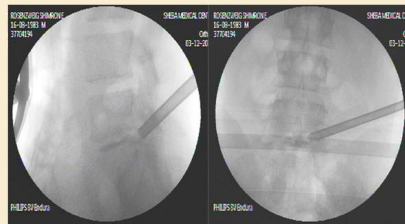
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Key points.....

- Minimally invasive surgical technique.
- Out-patient or single day hospitalization .
- Preformed with local anesthesia and mild conscious sedation



Placement of working channel



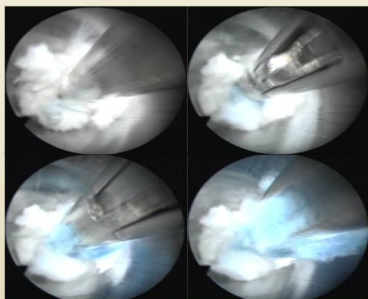
Working channel in place

Indications for Endoscopic discectomy:

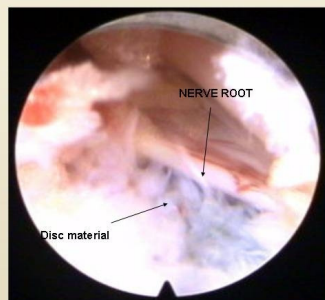
- Persistent disc-related back pain , radicular pain,
- A positive straight leg-raising test with radiologically proven disc herniation
- No significant improvement despite an adequate trial of non-surgical treatment

Methods

- Between 2004 to 2008 endoscopic discectomy was performed in. 150 patients
- 124 patients were available for follow up
- An evaluation of clinical outcomes (VAS, Oswestry Disability Index), complication rates, and surgical learning curve was preformed.



Disc removal through working channel



Endoscopic anatomy

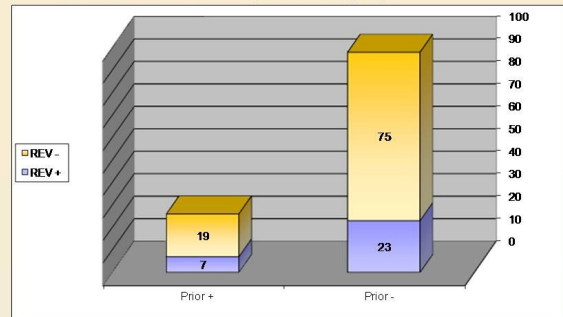
Demographic and clinical data

	No revision surgery (N=98)	Revision surgery (N=26)	Total (N=124)
Age at surgery	46.8 (range 18-80, SD 16.3)	48.3 (range 18-82, SD 14.9)	47 (range 18-82, SD 16.0)
Surgery prior to endoscopic discectomy	23 pts (23.7%)	7 pts (26.9%)	30 pts (24.1%)
level of operation			
L1-L4	16 pts (16.3%)	3 pts (11.5%)	19 pts (15.4%)
L4-L5	63 pts (64.3%)	19 pts (73.1%)	82 pts (66.1%)
L5-S1	19 pts (19.4%)	4 pts (15.4%)	23 pts (18.5%)

Results

- Mean follow-up time 29.8 months, (12 to 57 mnths, SD 13.7)
- Mean operation time 57.2 min (SD=18.5).
- Satisfactory clinical outcome as reflected by post operative VAS : (mean 3.6) and ODI (mean 21%) scores
- 26 patients required additional surgery because of continuing symptoms.
- Fewer revision surgeries as the surgeons became more experienced. (p value 0.043)

Revision rate and prior surgery



no significant difference found regarding revision rate between patients having endoscopic discectomy as a primary or as non-primary surgery.

Complications

- 1 post-surgery hypoesthesia (0.8%)
- One deep wound infection (0.8%), requiring surgical debridement.
- No dural tears, no surgery-induced motor deficit



Removed disc material

CONCLUSIONS

- Transforminal endoscopic discectomy technique has a satisfactory clinical outcome with a low total complication rate.
- Acceptable surgical technique learning curve.
- Endoscopic discectomy is a valid option for revision surgery regardless of the previous surgery type.