## Translaminar crossover decompression

For an effective minimally invasive lumbar decompression Rieger et al., changed the routine of segmental decompression. With a high speed drill or an ultrasonic knife they created a working channel, starting at the base of the spinous process of the upper lumbar vertebra slightly above the disc level, to target and decompress the contralateral recess: the translaminar crossover decompression (TCD).



They evaluated the feasibility and compare outcomes of a navigation-guided endoscopic translaminar crossover approach for segmental decompression (eTCD) in elderly patients with microscopic decompression using the same approach (mTCD).

A total of 740 elderly patients were enrolled in a prospective cohort study design. 297 mTCD patients and 253 eTCD patients completed 1-year follow-up visits. In addition to surgical data, numeric rating scales (NRS) for back and leg pain, core outcome measures index (COMI) and Oswestry disability index (ODI) were recorded preoperatively as well as three, six months and one year after surgery. MacNab criteria were supplemented by qualitative assessment of postoperative pain-free walking distance.

Comparison of preoperative and postoperative clinical scores showed significant improvement after TCD in both cohorts (p<0.01): ODI from  $50.3\% \pm 12.6\%$  to  $15.5\% \pm 7.43\%$ ; NRS (back) from  $6.9 \pm 1.9$  to  $2.5 \pm 1.3$ ; NRS (leg) from  $8.0 \pm 0.85$  to  $1.6 \pm 0.33$ ; COMI (back) from  $7.8 \pm 2.0$  to  $2.7 \pm 1.5$  whereas there were no significant differences in outcome between the cohorts.

TCD inherently eliminates central stenosis and facilitates the decompression of both recesses via mutual undercutting while preserving facet joint integrity <sup>1)</sup>.

1)

Rieger B, Sitoci-Ficici KH, Reinshagen C, Brautferger U, Schackert G, Molcanyi M, Pinzer T. Endoscopic and microscopic segmental decompression via translaminar crossover spinal approach in elderly patients. World Neurosurg. 2019 Jan 28. pii: S1878-8750(19)30176-7. doi: 10.1016/j.wneu.2019.01.078. [Epub ahead of print] PubMed PMID: 30703594.

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