Minimal invasive endoscopic rhizotomy: a new treatment for lumbar facet syndrome – technique and clinical experience

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Background: Facet joint have been implicated as a source of chronic low back pain, especially in degenerative arthritis. The radiofrequency rhizotomy or cryotherapy of the dorsal nerve branches can provide pain relief. The result of the intervention is highly depended on surgeons experience and the positioning of the intervention needles. In contrast, endoscopy allows a controlled anatomical rhizotomy under direct visualization of the facet joints. Goal of this study is to describe the endoscopic technique, and analyze our results according our clinical experiences.

Methods: We performed endoscopic rhizotomy of the lumbar and sacroiliacal facet joints under general anesthesia in patients who have previously reported after infiltration test at least a pain relief of 50% on the numerical analogue scale (NAS). We analyzed the surgical technique, the complications and described advantages and disadvantages compared to other forms of rhizotomies. Furthermore, the primary clinical outcome was specified in the relative difference, both at discharge and at the first follow-up after 8 weeks.

Results: A total of 117 patients (62 women, 55 men; mean age 60.37 years; 26-87 years) were included. 351 facets and 42 sacroiliacal joints were endoscopically thermo frequency coagulated. At discharge, 102 of 117 (84%) and at follow-up study 91 of 117 (78%) patients reported improvement in pain of> 50% on the NAS. Complications were minimal and average surgical time per segment was 17 minutes.

Conclusions: Endoscopic visual control of the facet joints diminished complication rate and surgical time, and increases the accuracy of the treatment. This improves the results and achieve very promising outcome in back pain relief under minimal invasive conditioning treatment.