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OUTCOME ASSESMENT FOR PERCUTANEUS TREATMENT OF DISC HERNIATION WITH ETHANOL GEL

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INTRODUCTION

Treatment of low back pain has entered a new era with the development of minimally invasive percutaneous techniques, leaving. The known indications for open surgery. Among many methods the use of ethanol gel showed significant results and practically no adverse effects. Between January 2013 and February 2016, we treated 123 patients with low-back pain or radicular pain (caused by disc protrusion of herniation) by intradiscal injection of radiopaque gelified ethanol under fluoroscopic control.

METHODS

Our results are based on clinical assessment and feed-back from 95 patients (54 men, 41 women; age range: 25 - 82 years, mean age: 52 years). 75 patients were treated for lumbar disc herniation (mostly at levels L4-L5 and L5-S1) and 20 patients for cervical disc herniation (mostly C4-C5 and C5-C6). Every patient had a MRI of cervical or lumbo-sacral spine previous to the procedure to confirm the disc pathology and a clinical assessment by a specialist - orthopedic or neurosurgeon and interventional neuroradiologist, who was also the operator at the procedure. Patients were evaluated clinically and by a questionnaire 1, 6 and 12 months after the treatment.

Outcome assessment was made by evaluating pain intensity (back and radicular pain if present) by VAS score, pain related disability, amount of medication for low-back pain treatment and patients' satisfaction with the procedure and posttreatment rehabilitation. Some patients had a MRI after the treatment.

RESULTS

According to the results of our study 83,2% of our patients experienced significant improvement of symptoms, 10,5% of patients had no relevant pain reduction,5,3% of patients underwent open surgery after minimally invasive procedure and 1 patient (1%) had a complication related to treatment - postpunctional syndrome. ln evaluating pain mean intensity of back pain was 8,17 before the treatment and 6,7 for radicular pain. The values showed a major drop after the first month and in 12 months after the procedure the values were 2,43 in back- pain, 2,28 for radicular pain. Almost all patients were significantly disabled by pain prior to treatment,54% severely and 41% moderate. 5% were mildly disabled. 12 months after the procedure 70,5% of patients had a clinically significant improvement: 20,5% with no disability,50% with low level of disability,25% with moderate level and 4,5% with high level of disability. 83% of patient use less medication for pain treatment, 9% are in no need for medication. Patients expressed their satisfaction with the posttreatment rehabilitation. 54% were very satisfied,33,5% satisfied and 12,5% partially satisfied. Patients evaluated their satisfaction with the procedure itself. 63% were very satisfied,29% satisfied,14% partially satisfied and 4% were not satisfied. 83,5% of patients would choose the treatment with gel ethanol again, 12,5% maybe and 4% would go for another method.

CONCLUSION

The main aim in dealing with low-back pain is treating the pain and consequently improving pain related disability. The results of pain evaluation in our study showed clinically significant amount of pain improvement: 70% drop in 12 months in back pain and 65% in radicular pain. Patients have significantly lower pain related disability and are in need of less or no medication.

Therefore we 'conclude that percutaneous treatment by gelified ethanol is a minimally invasive, technically simple and low-cost procedure that can be used in treatment of disc protrusion or herniation within the indications of use and without representing contraindication for further open surgery if needed.

Key words: Disc herniation, percutaneous treatment, minimally invasive treatment, low-back pain, radicular pain, gel ethanol