

Retrospective Comparison of Clinical Effects of Discogel® Radiopaque Gelified Ethanol Application in Chronic Pain Related to Cervical Disc Hernia



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INTRODUCTION

Cervical disc hernia is a pathological condition which usually causes pain on the neck, shoulders and arms⁽¹⁾, while radiculopathy and myelopathy caused by compression of spinal cord are rare. In this study, we aimed to retrospectively investigate the clinical effects of Discogel® Radiopaque Gelified Ethanol application in the patients with cervical disc hernia who had chronic pain and weakness on the neck, shoulders and arms.

MATERIAL-METHOD

Between the years 2013 and 2014, 18 patients with chronic pain related to cervical disc hernia who were admitted to Sakarya University Education and Training Hospital were enrolled in the study. All intervention was performed with 22 Gauge spinal needle under fluoroscopy (Figure 1). Data of age, gender, visual analogue scale (VAS) score before procedure, VAS in the 1st and 3rd months after procedure, Oswestry Disability Index (ODI) score and scores of Neuropathic Pain Questionnaire (DN-4) were retrospectively analyzed. VAS and ODI scores obtained before procedure and also in the 1st and 3rd months after procedure were retrospectively evaluated and SPSS IBM 20 programme was used in statistical analysis. Adverse effects were recorded after procedure.

RESULTS

The average age of the patients was 48.17 ± 10.23 . In the comparison of preoperative, postoperative 1st and 3rd months VAS values, the decrease in both postoperative values was accepted as significant ($p < 0.05$, Table 1). Although a decrease between 1st and 3rd month postoperative VAS values was detected, this was not statistically significant ($p > 0.05$, Table 1). In the comparison of postoperative 1st month, postoperative 3rd month and preoperative ODI values, ODI scores were found to be improved ($p < 0.05$, Table 1). Similarly, change in DN-4 values was correlated with VAS and ODI scores ($p < 0.05$, Table 1). After operation, 50% of the patients had sore throat, 44% had dysphagia, 27% had neck stiffness and transient increase in pain.



Figure 1: Fluoroscopic image of needle that inserted in C6 vertebrae's disc

	PREOPERATIVE	POSTOPERATIVE 1. MONTH	POSTOPERATIVE 3. MONTH	P
VAS	7.61	4.67	4.39	<0.05
ODI	52.72	36.89	33.5	<0.05
DN-4	2.94	1.5	1.52	<0.05

Table 1. The change in VAS, ODI and DN-4 scores with regard to time in the patients who had cervical discogel application. $p < 0.05$, significance of the postoperative 1st and 3rd month values when compared with preoperative values.

CONCLUSION

Cervical discogel application involves the injection of gelified ethanol (alcohol)⁽²⁾ into bulging part of the herniating intervertebral disc. Gel contains alcohol which does not go out of the disc and alcohol causes hernia to dry. By this way, it decreases the compression on spinal cord and nerve roots.⁽²⁾ We think that Discogel® Radiopaque Gelified Ethanol application is a technique which decreases pain scores, the degree of neuropathic pain and functional status of the patients who have the symptoms of chronic pain and weakness on the neck, shoulders and arms.

REFERENCES

1. J Med Case Rep. 2012; 6: 166.
2. AJNR Am J Neuroradiol. 2010 Sep;31(8):1454-6