

Recurrence Rate After Herniotomy Only Versus Conventional Discectomy in Lumbar Disc Herniation

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Introduction

Lumbar disc herniation(LDH) recurrence necessitating reoperation can pose problems following spinal surgery, with an overall reported incidence of approximately (3–13%). The purpose of this study is to identify the rate of recurrence disc herniation, to discuss the radiologic indications for herniotomy and to analyze clinical outcomes compared with conventional discectomy.

Methods

The authors retrospectively reviewed 114 patients who underwent herniotomy & conventional discectomy by a single surgeon for single-level LDH between June 2009 and May 2012. Evaluation for LDH recurrence included detailed medical chart and radiologic review and telephone interview. Postoperative VAS and the Korean version of ODI were examined one week after surgery. Clinical outcome was investigated following Odom's criteria from three months to three years.

discectomy for single-level lumbar disc hemiation Herniotomy Conventional P-v	110			
discectomy for single-level lumbar disc hermation	TI	erniotomy	Conventional	P-value
	discectomy for single-lev	vel lumbar disc h	emiation	

		discectomy	
Number	57	57	
Male: Female	33:24	31:26	0.570
Mean age	50	47.6	0.460
Recurrence rate	7% (4 cases)	5.2% (3 cases)	1.000
Recurence level	L3-4:1 case, L4-5:2	L4-5:2 case, L5-S1:1	
	case, L5-S1:1 case	case	
Mean length of time to recurrence	16.5 wks (2~53 wks)	29 wks (13~42 wks)	

Results

Of the 57 patients for whom the authors were able to definitively assess symptomatic recurrence status, four patients (7%) experienced LDH recurrence following single-level herniotomy and three patients (5.2%) conventional discectomy.

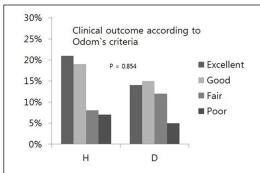
Postoperative VAS decreased more following conventional discectomy than herniotomy, but the difference was not significant. There were no differences in the Korean version of ODI between herniotomy group and conventional discectomy group. The herniotomy group had better results than the conventional discectomy group in clinical outcome from three months to three years, but the difference was not significant.

Table. Statistical ana	lysis of VAS and Kor	ean version of ODI score	:
between herniotomy	and conventional dis	cectomy.	
	Hemiotomy	Conventional discectomy	P value
Preoperative VAS	5.8	6.5	0.106
Postoperative VAS	2.9	1.8	0.563
Preoperative ODI	45.87	48.62	0.619
Postoperative ODI	25.45	28.62	0.347

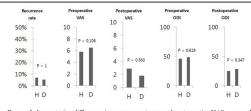
Table. Three year outcome of herniotomy and conventional discectomy

(Mean: 1.2 year after surgery)

		Hermotomy	discectomy
No	Criteria	Response(ratio)	Response(ratio)
1	Excellent	12 (21%)	8 (14%)
2	Good	11 (19%)	9 (15%)
3	Fair	5 (8%)	7 (12%)
4	Poor	4 (7%)	3 (5%)
Total		32/57(55%)	27/57(46%)



Bar graph showing clinical outcome according to Odom's criteria between hemiotomy(H) and conventional discectomy(D), revealing no significant intergroup differences. P value is presented.



Bar graph demonstrating differences in recurrence rate, pre and postoperative VAS, $\;$ pre and postoperative Korean version of ODI between hemiotomy(H) and conventional discectomy(D). There were no significant differences. P values are presented .

Conclusions

There were no significant differences in clinical outcome between herniotomy and conventional discectomy. Recurrence rates following herniotomy for LDH compare favorably with those in patients who have undergone conventional discectomy, lending further support for its effectiveness in treating herniotomy.

Discussion

We have described the results of the retrospective case control study for comparison of early and three years outcome after herniotomy and conventional discectomy in 114 patients with herniated lumbar discs. The repeated operation rate did not increase following removal of the herniated material only in our study. Outcome analysis demonstrated a trend in favbeor of herniotomy. To conclude, herniotomy did not seem to entail a higher rate of recurrences compared with conventional discectomy. And there were no significant differences in clinical outcome between herniotomy and conventional discectomy. Limitations of the study were potential selection bias in the control group and relatively short follow-up period. For these reasons, we could not draw long-term clinical outcomes interpretations.