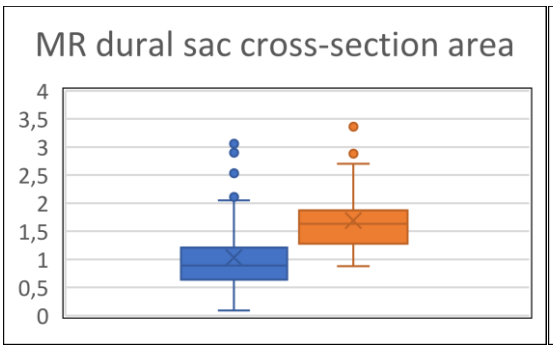
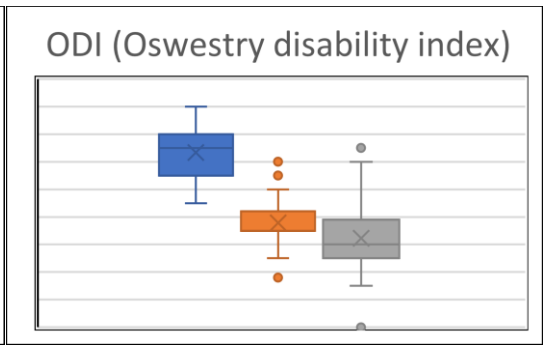
Effect of Indirect Neural Decompression Through Extraforaminal Interbody Fusion for Degenerative Lumbar Disease

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Abstract

Statement of the problem: Traditional treatment for symptomatic lumbar stenosis uses direct posterior decompression with/without fusion. Using the direct decompression method could be complicated by incidental durotomy, perineural fibrosis, haematoma and postural muscle fibrosis. Alternative method to the treatment are methods using indirect decompression via limited approach. Purpose of the study is to evaluate clinically and radiologically the effect of the indirect decompression vith extraforaminal intebody fusion. Materials and methods: Eighty-two patients presenting with degenerative lumbar disease with segmental instability underwent extraforaminal interbody fusion combined with transpedicular fixation and circumferencial fusion. All patients were clinically assessed using Oswestry Disability Index (ODI) and Visual analog pain scale (VAS) and magnetic resonance images were obtained preoperatively and one year postoperatively to measure the cross-sectional area (CSA), disc height, segmental and lumbar lordosis. Results: The mean ODI significantly improve from 63,4 preoperatively to 32,3 postoperatively (P < 0,001). The mean VAS significantly improve from 5,95 to 2,63 postoperatively (P < 0,001). The mean CSA increased from 103mm² preoperatively to 169mm² postoperatively (P < 0,001). The median extension ratio of CSA was 33%. Disc height, segmental disc angle and lumbar lordosis also improved significantly. Only three (3,7%) patients were revised using direct central decompression due to neurologic deterioration. Conclusion: Spinal stenosis was resolved successfully by indirect decompression through extraforaminal interbody fusion via transmuscular limited approach.





	Preoperatively		Postoperatively (3M)		Postoperatively (1Y)		Significant P<0,001)			Significant P<0,001)		
MR CSA	1,03	0,58	1,69	0,56			0,66	0,33	<0,001			
VAS	5,95	0,91	2,99	0,62	2,63	1,19	-2,96	1,03	<0,001	-3,32	1,40	<0,001
ODI	63,36	8,63	37,81	7,36	32,27	11,62	-25,54	9,81	<0,001	-31,09	14,05	<0,001

Figure 1, Tab 1: Radiological (SAC) and clinical (ODI, VAS) effect of indirect decompression via ELIF method using transmuscular limited approach.

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