

Functional Outcome Of Minimally Invasive Surgery – Transforaminal Lumbar Interbody Fusion In University Kebangsaan Malaysia Medical Centre

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INTRODUCTION:

MIS-TLIF has the same outcome results on long term follow ups in comparison with Open TLIF. However it is the early outcome results which

makes MIS TLIF superior over the traditional open technique.

METHODS:

Retrospective analysis of sixty-two patients who underwent one or more level MIS TLIF during 2012-2013 were taken for the study, 42 patients followed up till 24 months. Clinical assessment based on Oswestry Disability Index (ODI), visual analog pain scores (VAS), Short Form-36, Prolo score were documented before surgery, 6 weeks, 6, 12 and 24 months postoperative. Hospital stay, blood loss, operative time were also taken into account.

RESULTS:

The mean age group was 61.14 years. There were 38.1% males and 61.9% females. Operative time 149.55 minutes, mean blood loss 166.67ml, length of post-operative hospital stay of 2.76 days. There was a significant improvement in Oswestry Disability Index from 54.61% to 7.36% ($P < 0.05$) at final follow up, visual analog pain scores (VAS) for back pain and lower limb pain was 1.55, 0.79 respectively ($P < 0.05$). Quality of life scores. Short Form-36, ($P < 0.05$) at 6 weeks, and final follow up at 24 months. Complication rate was 9.5%. None of the complicated cases had to be converted to open TLIF.

DISCUSSION:

Benefit of MIS-TLIF is a known fact, and outcome measures similar with its open counterpart as described by Villavicencio et al¹. Much earlier post-operative ambulation² and shorter hospital stay makes this technique superior over the traditional open method. Even then it still remains as a challenge for spine surgeons to effectively carry out the procedure. However once mastered the technique, its implication for the patient care can make a great impact. There are certain patients who would highly benefit from MIS-TLIF as it reduces blood loss and early discharge.

		N	Mean	Std. Deviation	P value
VAS Back Pain	Pre Op	42	6.24	1.57	0.001*
	6 weeks	42	1.36	0.96	
	24 Months	42	1.55	1.11	
VAS Leg Pain	Pre Op	42	7.31	1.22	0.001*
	6 weeks	42	0.64	0.91	
	24 Months	42	0.79	1.02	
ODI	Per Op	42	54.62%	16.31	0.001*
	6 weeks	42	7.12	8.62	
	24 Months	42	7.36	8.71	

Table 1: Visual analogue scale (VAS) and Oswestry Disability Index (ODI) pre-operative, 6 weeks and 24 months post-operative

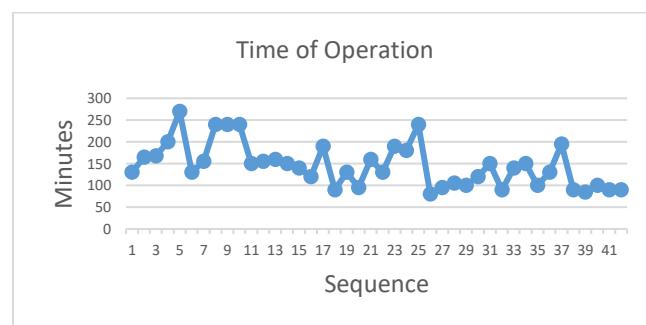


Figure 1: Operative time in minutes for cases from first case in 2012 to last case in 2013 during the study period.

CONCLUSION:

MIS-TLIF has an excellent immediate post-operative results in terms of outcome measures. It is as safe as open TLIF and it has a considerable learning curve and significantly low complication rate. This technique can be used routinely and effectively for spine surgeries as well as for palliative care of spinal metastasis.

REFERENCES:

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