Lumbar discectomy: a national survey of neurosurgeons over 10 years

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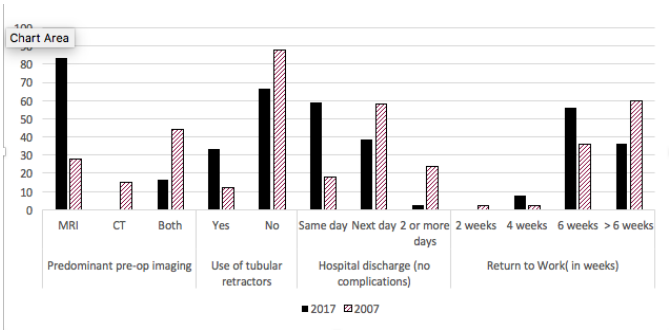
Abstract

Statement of the Problem: The purpose of our study was to ascertain neurosurgeons practices in the surgical management of one-level lumbar discectomies in the Canadian adult population and to determine any changes over a ten year period. Method: One-page questionnaire faxed to each Neurosurgeon in Canada in 2007 and the same questionnaire faxed and/or emailed to each Neurosurgeon in Canada in 2017. Findings: In 2007 112 completed surveys were returned – response rate 64% and 109 completed surveys were returned in 2017 – response rate 42%. Of the 13 questions asked regarding practice patterns 8 were statistically significantly different in 2017 vs. 2007 ($p \leq 0.05$) and 5 were not statistically different. (See Table 1 and Figure 1) Conclusion: Our surveys have identified variations in practice patterns amongst Canadian neurosurgeons with respect to performing one-level lumbar discectomies. There have been changes over a 10 year period. In particular, patients are going home sooner and returning to their activities more quickly.

Table 1: Comparison of change in practice between responses to survey 2017 and survey 2009

	2017 Survey n (%)	2009 Survey n (%)	P-value
1- Do you use pre-incision localizing plain film x-ray?			
Yes	51 (66)	56 (57)	0.281
No	26 (34)	42 (43)	
2- Is your predominant pre-operative imaging			
MRI	65 (83.3)	27 (28)	
CT	0 (0)	15 (15)	<.0001
Both	13 (16.7)	43 (44)	
Either	N/A	13 (13)	
3- Do you use preoperative antibiotics?			
Yes	77 (99)	90 (92)	0.045
No	1 (1)	8 (8)	
4- Do you use pre-incision local anaesthetic?			
No	24 (31)	39 (40)	0.345
Yes	53 (69)	59 (60)	
5- Do you use intramuscular local anaesthetic injection?			
Yes	57 (74)	43 (44)	<0.001
No	20 (26)	55 (56)	
6- Your magnification preference is:			
Loupes	8 (10.4)	19 (19)	
Microscope	49 (63.6)	68 (70)	<0.001
Both	26 (26.0)	3 (3)	
Neither	N/A	8 (8)	
7- Do you use tubular retractors?			
Yes	26 (33.3	12 (12)	0.001
No	)52 (66.7)	86 (88)	
8- For dural tears, do you use fibrin glue?			
Yes	72 (92.3)	75 (77)	0.007
No	6 (7.7)	23 (23)	
9- Prior t o closure do you use fat graft?			
Yes	14 (18.0)	26 (27.0)	
No	62 (82.0)	71 (72.0)	0.207
Depends/Sometime	N/A	1 (1.0)	
10- Do you use epidural steroids prior to closure?			
Yes	38 (51.0)	60 (61)	
No	40 (49.0)	36 (37)	0.127
Depends/Sometime	N/A	2 (2)	
11- If there are no complications, when do you discharge from hospital:			
Same day	46 (59.0)	18 (18.0)	
Next day	30 (38.5)	57 (58.0)	<0.001
2 days or more days	2 (2.5)	23 (24.0)	
12- If patients job requires physical labour, when do you recommend a post-operative return to work (in weeks)?			
2 weeks	0 (0)	2 (2.0)	
4 weeks	6 (7.8)	2 (2.0)	0.003
6 weeks	43 (55.8)	35 (36.0)	
More than 6 weeks	28 (36.4)	59 (60.0)	
13- Would you operate on a patient whose MAJOR complain is back pain?			
Yes	8 (10.7)	7 (7.0)	0.589
No	70 (89.7)	91 (93.0)	

Fig. 1



Recent Publications

1. Rempel J, Busse JW, Drew B, Reddy K, Cenic A, Kachur E, Murty N, Candelaria H, Moore AE, Riva JJ.(2017). Patients' Attitudes Toward Nonphysician Screening of Low Back and Low Back Related Leg Pain Complaints Referred for Surgical Assessment.Spine (Phila Pa 1976). 2017 Mar;42(5):E288-E293.

2. Catana D, Koziarz A, Cenic A, Nath S, Singh S, Almenawer SA, Kachur E. (2016) Subdural Hematoma Mimickers: A Systematic Review. World Neurosurg. 2016 Sep;93:73-80.

3. El-Zuway S, Farrokhyar F, Kachur E (2016) Myelopathic signs and functional outcome following cervical decompression surgery: a proposed myelopathy scale. J Neurosurg Spine. 2016 Jun;24(6):871-7.

4. Almenawer SA, Badhiwala JH, Alhazzani W, Greenspoon J, Farrokhyar F, Yarascavitch B, Algird A, Kachur E, Cenic A, Sharieff W, Klurfan P, Gunnarsson T, Ajani O, Reddy K, Singh SK, Murty NK (2015) Biopsy versus partial versus gross total resection in older patients with high-grade glioma: a systematic review and meta-analysis. Neuro Oncol. 2015 Jun;17(6):868-81.

5. Badhiwala JH, Farrokhyar F, Alhazzani W, Yarascavitch B, Aref M, Algird A, Murty N, Kachur E, Cenic A, Reddy K, Almenawer SA (2014) Surgical outcomes and natural history of intramedullary spinal cord cavernous malformations: a single-center series and meta-analysis of individual patient data: Clinic article. J Neurosurg Spine. 2014 Oct;21(4):662-76.