

Dural Tears Secondary to Operations of the Lumbar Spinal Disorders

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– Abstract –

Study Design : A retrospective study.

Purpose : To review the results of the treatment of dural tears, sustained during operations on the lumbar spinal disorders.

Materials and Methods : From Jan. 1991 to Dec. 2000, 694 consecutive patients had a decompression of the lumbar spine, 35(5%) patients sustained a dural tear during the operations. Of 32 patients who were followed up for more than one year, 29 patients were detected dural tear intraoperatively. 24 patients were treated with primary repair, 4 patients with fibrin glue and one patient with dural reconstruction and fibrin glue. Postoperative management consisted of closed wound drainage for an average of 3.3 days and bed rest for an average of 9.3 days.

Results : The total subfascial drains averaged an output of 626(18- 1698) milliliters of 32 patients. Clinical symptoms were complained of headache in 12 patients, nausea in 7 patients, dizziness and vomiting in 2 patients postoperatively, but all had resolution of these symptoms after conservative treatment. A superficial wound infection occurred in one of these patients, managed with antibiotic therapy. Whereas the deep wound infection occurred in one, managed with wound debridement and antibiotic therapy successfully. A mean follow up of 34 months was available and showed satisfactory clinical results for 29 of the patients(91%).

Conclusion : Closed wound drainage can be used safely in the presence of a dural repair and the patient needs to keep on bed rest while the drainage into a sterile bag is performed.

Key Words : Lumbar spine, Dural tear, Treatment

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Table 1. Morbidity of dural tears according to diagnosis

	HNP [†]	Stenosis	Revision	Total
No*. of patients	209	416	69	694
No. of tears	3(1%)	24(6%)	8(12%)	35(5%)

No*, number; HNP[†], herniated nucleosus pulposus

Table 2. Summary of patients

No.	Age	Sex	Dx.*	Detect	Op [†]	Dura Tx [‡]	drain day	T. amount(ml) [§]	Sxs	Cl. result [¶]	Rad.**	Cxs ^{††}	F/U(M) ^{‡‡}
1	67	M	Stenosis	intraop	decom & fu ^{§§}	repair & Fi	2	239		G	B		12
2	57	M	Stenosis	intraop	decom & fu	repair & Fi	2	417		G	B		23
3	60	F	spondylolisthesis	intraop	decom & fu	repair & Fi	3	140	nausea	G	C		16
4	66	M	spondylolisthesis	intraop	decom & fu	repair & Fi	5	1609		G	B		12
5	50	F	Stenosis	postop	decom & fu		6	817	headache	G	A		25
6	49	F	spondylolisthesis	intraop	decom & fu	repair	3	706	headache	E	A		96
7	50	F	Stenosis	intraop	decom & fu	repair	2	301	headache & dizziness	G	B		58
8	56	F	Stenosis	intraop	decom & fu	repair & Fi	2	681		G	B		98
9	68	M	revision	intraop	decom & fu	repair & Fi	6	955	headache	G	D	infection	19
10	50	M	spondylolisthesis	intraop	decom & fu	Fi	1	283	nausea	G	B		38
11	64	F	spondylolisthesis	intraop	decom & fu	repair & Fi	2	498	headache	G	B		12
12	18	F	HNP ^{¶¶}	intraop	decom	repair & Fi	6	480	headache	G			12
13	62	F	spondylolisthesis	intraop	decom & fu	repair & Fi	3	509	nausea	F	A		20
14	57	F	revision	intraop	decom & fu	repair & Fi	2	610	nausea & vomiting	E	A		70
15	71	M	revision	intraop	decom & fu	repair & Fi	3	1276	headache	F	A		39
16	62	F	spondylolisthesis	intraop	decom & fu	repair & Fi	2	399		G	B	numbness	31
17	62	F	Stenosis	intraop	decom	repair	3	574		E			83
18	62	F	Stenosis	intraop	decom	repair	2	165	dizziness & vomiting	G			80
19	57	F	Stenosis	intraop	decom & fu	repair	2	291		G	B	numbness	39
20	52	F	Stenosis	intraop	decom & fu	Fi	6	1047		G	A		22
21	54	F	spondylolisthesis	intraop	decom & fu	repair & Fi	4	1063		G	B		34
22	66	F	spondylolisthesis	intraop	decom & fu	repair & Fi	5	1698	headache & nausea	G	A		33
23	36	F	Stenosis	intraop	decom & fu	repair & Fi	3	269		G	A		12
24	78	M	Stenosis	intraop	decom & fu	repair & Fi	3	161	nausea	E	C		21
25	55	M	spondylolisthesis	intraop	decom & fu	Fi	3	392		E	A		47
26	43	M	revision	intraop	decom	Fi	2	18	headache & nausea	E			13
27	48	F	revision	intraop	decom & fu	repair & Fi	4	1066	headache	G	D		12
28	66	F	spondylolisthesis	intraop	decom & fu	repair & Fi	2	384		F	C	infection	12
29	27	M	revision	intraop	decom	repair & Fi	1	199		G			19
30	21	M	revision	postop	decom & fu		5	539		G	B		12
31	56	F	spondylolisthesis	intraop	decom & fu	repair & Fi	3	605	headache	G	A	numbness	37
32	53	F	revision	postop	decom & fu		6	1647	headache	E	B		22

*, Diagnosis; †, operation; ‡, Dura treatment; §, Total amount; ||, Symptoms; ¶, Clinical result (E: excellent, G: good, F: fair); **, Radiographic result; ††, Complications; ‡‡, follow up(months); §§, decompression & fusion; ¶¶, fibrin glue; ¶¶¶, herniated nucleolus pulposus.



Fig. 1. Longitudinal sonogram of 52 years old woman(No. 20).
An abnormal fluid-filled cyst is seen as a hypoechoic lesion under the paraspinal muscle.

3.3(1-6) , 626(18 - 1698) , 10 4 9.3(4 -22) 12 , 7 , 가 2 2 2 2 1 (Fig. 1) 2 4 , 1 (Table 2, No. 9). 3 가 가 2 1 9 (Table 2, No. 9). 1 2 22 , 3 29 (91%) 27 A 10 , B 12 , C 3 , D 2 22 (81%) (Table 2).

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Wang 2.9(1-6) ,

9.3(4-22)

2 , 2

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81%

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