

Does the technique affect the incidence of Spondylodiscitis post Lumbar Micro discectomy? - A

Retrospective analysis of 3063 patients and three different techniques

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Introduction

The incidence of spondylodiscitis following lumbar microdiscectomy ranges from 0.2 to 4%. Our study aims to determine if surgical technique has any influence on the incidence of spondylodiscitis in patients undergoing lumbar microdiscectomy and to compare this to the incidence of spondylodiscitis published in the literature.

Methods

Retrospective audit in a single centre over a period of 7 years operated by three groups of surgeons following three different surgical techniques. A total of 3063 patients were analysed from 2005 to 2011 for discitis post operatively. The male to female ratio was 1:1. The first group followed a standard micro-discectomy technique, the second group used antiseptic (Savlon) irrigation at the end of the procedure to irrigate the disc space and the third group followed standard microdiscectomy along with usage of a separate disc apparatus when discectomy is performed (Figure.1). The number of patients operated in the individual groups was 559, 1122 and 1382.

Results

The total number of patients who had postoperative discitis was 3(0.10%) with a range of 0.07 to 0.18%. There was one case of discitis in each group. The incidence of spondylodiscitis in Group A, B and C were 0.18%, 0.09% and 0.07% respectively. Figure.2 summarises the individual cases of spondylodiscitis in each group.

The average duration of the procedure in group A and B was 45 minutes and in group C it was 60 minutes.

Conclusions

This study involving three different techniques used for lumbar microdiscectomy reveals that standard microsurgical technique with usage of antiseptic irrigation for the disc space and usage of separate disc apparatus has lesser incidence of spondylodiscitis in comparison to standard microdiscectomy. The overall incidence of discitis in our series remains less than the published results in literature so far.

Learning Objectives

By the conclusion of the session the participants will be able to identify the key factors responsible for reducing the incidence of spondylodiscitis following lumbar microdiscectomy. Meticulous surgical technique and antibiotic prophylaxis still remains the key in reducing post operative infection and spondylodiscitis.

Summary of three techniques utilised for lumbar microdiscectomy

	Group A	Group B	Group C
Antibiotic Prophylaxis	1.5 gms of Cefuroxime at induction	1.5 gms of Cefuroxime at induction	1.5 gms of Cefuroxime at induction
Surgical Technique	Single skin knife for incision	Single skin knife for incision	Two skin knives for incision
	Standard micro discectomy+ saline irrigation	Standard micro discectomy + Savlon irrigation	Standard micro discectomy + Separate disc apparatus+ saline irrigation
Average time for procedure (mins)	45	45	60
Incidence of discitis % /Total incidence	0.18/0.10	0.09/0.10	0.07/0.10

Figure.1

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Details of three cases of Spondylodiscitis with their outcomes and demographics

S.No	Group	Age	Sex	Primary/ Re-do	Consultant/ Trainee	Organisms	Outcome	Onset of Discitis
1	A	35	F	Re-do	Consultant	None	Osteomyelitis	3 weeks post op
2	B	69	M	Primary	Consultant	None	Spinal fusion	2 weeks post op
3	C	39	M	Primary	Trainee	None	Good	4 weeks post op

Figure.2