Prognostic factors associated with unplanned re-intervention after spine surgery.

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CNS 2018 ANNUAL MEETING HOUSTON, TEXAS OCTOBER 6-10, 2018

Introduction

Currently, the readmission rate and risk factors reported secondary to spine surgery are a predictive factor quality and security in this surgeries. (1,2,3)

Objective

To determine:

- the incidence
- causes
- **prognostic factors**

associated with unplanned reoperation after first time spine surgery.

Methods

Retrospective review of a prospective cohort.

Patients operated for the first time with any of the following techniques: Discectomy, Laminectomy, anterior and posterior fusion of the lumbar and / or cervical spine, between january 2005 and december 2015.

Inclusion Criteria:

-Both genders
-Regardless of Age
-Complete clinical records
-First time surgery
-minimum follow up of 24 months

Exclusion criteria:

-Spinal Deformities
-Obesity
-Percutaneous procedures

The demographics, comorbi- dities, laboratory tests, surgica procedure and complicatios of patients were reviewed. The statistical analysis, logistic regression, were used to identify patient operative variables predictive of reoperation.

Table1

Table 1. Patient Demographics

Variable	Cases n=1273	p
Edad	*51 +-17.3 años*	0.57
Sexo: Hombres Mujeres	737 (53%) 655(47%)	0.17
Median of reoperation	33 days	

Table2

Table 2. Causes of reintervention

Cause of Reop	N (94)	(%)	p
Infection	21	23,6	0.001
Screw	17	19,1	
Implant	17	19,1	
Neurologic deficit	14	15,7	
LCR	4	4,5	
Haematoma	3	3,4	

Results

We identified 1392 patients who underwent cervical or lumar spinal surgery, only 1273 were inclued. The rate of reoperation was found to be 7.4%, 94 patients. Table 1

The most comon causes for reoparation were wound infection (23.6%), implants related complication (19.1%) and neurologic deficit (15.7%). Table 2

For the posterior aproach had a much higher rate of reintervention (p 0.001).Table 3

The **predictors of reoperation** inclued: **operate 3 or more segments** (OR 3.594, 95% C.I.: 1.836-7.038) and diagnosis of **postraumatic vertebral compression fracture** (OR 2.596, 95% C.I.: 1.346-5.005). Table 4

Table3

Table 3. Type of approach surgery for reoparation

Approach	Cases 1273	(%)	Operate 1179	(%)	Re-operate 94	(%)	p
ANTERIOR	264	20.82	248	21.12	16	17.02	0.001
POSTERIOR	983	77.52	910	77.51	73	77.66	
LATERAL	15	1.18	13	1.11	2	2.13	
MINI	3	0.24	0	0	3	3.19	
DOBLE	3	0.24	3	0.26	0	0	

Table4

Tabla 5. Binary logistic regression

	P	Exp(B)	I.C. 95.0% para EXP(B)	
3 o more segment	0.000*	3.413	1.792	6.501
Com Fx	0.018*	2.028	1.127	3.651

*Variables with a significant P vlaue less than 0.05
IC indicates confidenceinterval

Conclusions

Surgeons should identify the rate, reasons and pronostic factors for unnplaned reoperation of spinal surgery to improve: posoperative results, decrease complications trans and posoperative and plan better surgeries.

Disclosures

The author wish to thanks INR, intitution that has formed him as a spine surgeon. The authors have no personal, financial, or institutional interest in any of the materials, or devices described in this study.

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