Impact of complications on the quality of life of patients who underwent surgery for spinal deformity

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Introduction

The complications in spine deformity surgery are multiple. There is a multiple of articles that talk about them and the rate at which they occur is very variable.

COMPLICATION

Neurosurg Focus 28 (3):E3, 2010

Adult scoliosis surgery outcomes: a systematic review

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Rate=41.2%

Review

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Rate of complications in scoliosis surgery – a systematic review of the Pub Med literature

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Rate=44%

A Comprehensive Review of Complication Rates After Surgery for Adult Deformity: A Reference for Informed Consent

Daniel M. Sciubba, MD[a,*], Alp Yurter, BS[a], Justin S. Smith, MD, PhD[b], Michael P. Kelly, MD[c], Justin K. Scheer, BS[d], C. Rory Goodwin, MD, PhD[a], Virginie Lafage, PhD[e], Robert A. Hart, MD[f], Shay Bess, MD[g], Khaled Kebaish, MD[h], Frank Schwab, MD[e], Christopher I. Shaffrey, MD[b], Christopher P. Ames, MD[i], The International Spine Study Group (ISSG)

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Rate=55%

Rate long time=20,5%

How to affect complication in spine deformity surgery in heatlth related quality of life?

Spine (Phila Pa 1976). 2015 Sep 15;40(18):1414-21. doi: 10.1097/BRS.0000000000001020.

Radiographical and Implant-Related Complications in Adult Spinal Deformity Surgery: Incidence, Patient Risk Factors, and Impact on Health-Related Quality of Life.

Soroceanu A[1], Diebo BG, Burton D, Smith JS, Deviren V, Shaffrey C, Kim HJ, Mundis G, Ames C, Errico T, Bess S, Hostin R, Hart R, Schwab F, Lafage V; International Spine Study Group.

About the material=**31.7%** (Re-surgery 52.6%)

Rod fracture= 47%

Proxinal junctional kyphosis=54,5%

} HRQL ⇩

Impact of Frailty and Comorbidities on Surgical Outcomes and Complications in Adult Spinal Disorders.

Yagi M[1,2,3], Fujita N[1,3], Okada E[1,3], Tsuji O[1,3], Nagoshi N[1,3], Tsuji T[2,3], Asazuma T[2], Nakamura M[1,3], Matsumoto M[1,3], Watanabe K[1,3,4].

About the material=**41.3%**

Infections=**19.6%**

Proxinal junctional kyphosis=**19,6%**

} HRQL ⇩

The aim of our study was to analyze the impact on health related quality of life of patients had suffered complications in adult spine deformity surgery

Material and Method

Retrospective analysis of two groups of patients according to whether they had suffered or without complications

The inclusion criteria

- Age>30 years
- SVA>5 cm
- Cobb>20°
- Instrumented levels>4
- Min 1 year follow-up

Health related quality of life test

- VAS
- ODI
- SRS-22

Statistic analysis

- U Mann-Whitney
- T Student

Results

N=65 pacients

Complication YES=22
Complication NO=43

Average Follow-up 2 years

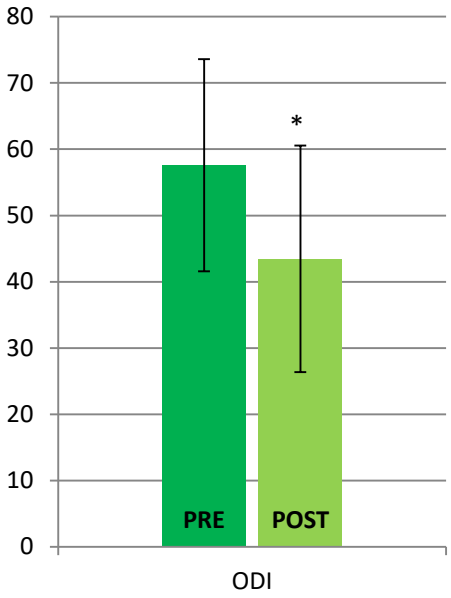
75,4% female
Median:
- •Age 68 years (56,5-74)
- •7 instrumented levels (5-8)
- •Bledding 406.50 cc (270-682.25)

Average
- •BMI: 27.73 (±4.78)
- •Surgery time: 305.47 min (±62.7)

Type of complication	Number of complications
Proximal junctional kyphosis	10
Bar roture	4
Mobilization of material	3
Inferior instrumented vertebra fracture	1
Infection	6

Results

Complication YES



P-Value<0,05

Test	Pre complication	Post complication	p-value
VAS back*	8 (5,50-9)	4 (1,50-7,50)	<0,05
VAS Leg *	8 (5-8)	2 (0,50-5)	<0,05

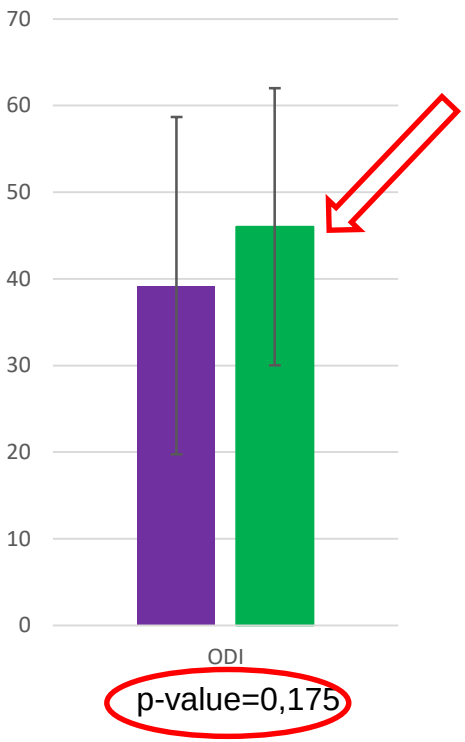
Test	Pre complication	Post complication	p-value
SRS22_Función	2,55 (0,66)	2,93 (0,85)	0,082
SRS22_Dolor*	1,80 (1,40-2,90)	3,00 (2,20-4,00)	<0,05
SRS22_Selfimage	2,23 (0,86)	3,04(0,70)	<0,05
SRS22_Mentalhealth	2,30 (0,81)	3,65 (0,77)	<0,05
SRS22_Satisfaction	3,25 (1,25)	3,84 (0,91)	0,095
SRS22_Total	2,33 (0,69)	3,19 (0,76)	<0,05

Values expressed in means and standard deviations. P-values calculated with the Student's T test for related samples. * Non-normal values: data expressed in medians and interquartile ranges. P-value calculated with the Wilcoxon W test

Results

We also analyzed the final values of the groups of patients where we see that patients who suffered complications, their quality of life is affected in all parameters, although no statistically significant differences with respect to the group that has not been reoperated due to life complications

Complication YES
Complication NO



Test	No Complication	YES Complication	p-value
VAS back*	2,50 (0-6)	5 (2,50-8)	0,086
VAS Leg *	2 (0-5,25)	4 (1-7,75)	0,204

Test	No Complication	YES Complication	p-value
SRS22_Función	3,01 (0,81)	2,86 (0,79)	0,543
SRS22_Dolor	2,96 (0,93)	2,88 (1,02)	0,781
SRS22_Selfimage*	3 (2,45-3,80)	3 (2,20-3,40)	0,285
SRS22_Mentalhealth	4 (2,65-4,509	3,80 (3-4)	0,190
SRS22_Satisfaction*	4,25 (3,50-4,88)	4 (3-4,50)	0,389
SRS22_Total	3,25 (0,80)	3,11 (0,72)	0,520

Values expressed in means and standard deviations. p-valuees calculated with the Student's T test. * Non-normal values: data expressed in medians and interquartile ranges. p-value calculated with the Mann-Whitney U test.

Discussion

- The percentage of complications is adjusted to what is published in the bibliography (36.92%)

- In our patients, the complications they suffer are reflected in a greater functional limitation and worse results in the subdomains of the SRS-22

- Despite that, patients improved surgery.

Conclusion

- Measure the percentage of complications in the complex that influence multiple causes in its development

- For example, it is not known yet why the PJK is clearly known that Lordosis is closely related or the infections are becoming more common

- It would be convenient to investigate the possible primary causes of complications

Disclosures

None of the authors has any potential conflict of interest.