
Spinal Deformity in Sotos Syndrome: First Results of Growth-Friendly Surgery

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Introduction

Sotos syndrome $\approx$ Cerebral Gigantism

Excessive overgrowth

<500 cases (Sotos et al. 1964)



Clinical and Molecular Heterogeneity in Brazilian Patients with Sotos Syndrome

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Background

Sotos syndrome and scoliosis surgical treatment: a 10-year follow-up

Romina Corrado • Alejandra Francheri Wilson •
Carlos Tello • Mariano Noel • Eduardo Galaretto •
Ernesto Bersusky

- >> 1st case of growth-friendly surgery
- >> 7.9 yo boy



Study Objectives

- 1) Describe the presentation of spinal deformity in children with Sotos syndrome
- 2) Report preliminary results of growth-friendly instrumentation in these patients

Methods

Study Design

Retrospective cohort (2 EOS databases)

Inclusion:

Sotos syndrome

Early-onset scoliosis

Growth-friendly surgery (GFI)

Exclusion:

>10 years old at GFI

<2Y follow-up



Results

Cohort: 13 cases (9 boys)

Mean age: 3.7 years



Curve types: 5 TL, 4 double major, 2 double thoracic, 2 main thoracic

Results

Index Surgery

Mean age: 5 years (range 1.8-10)

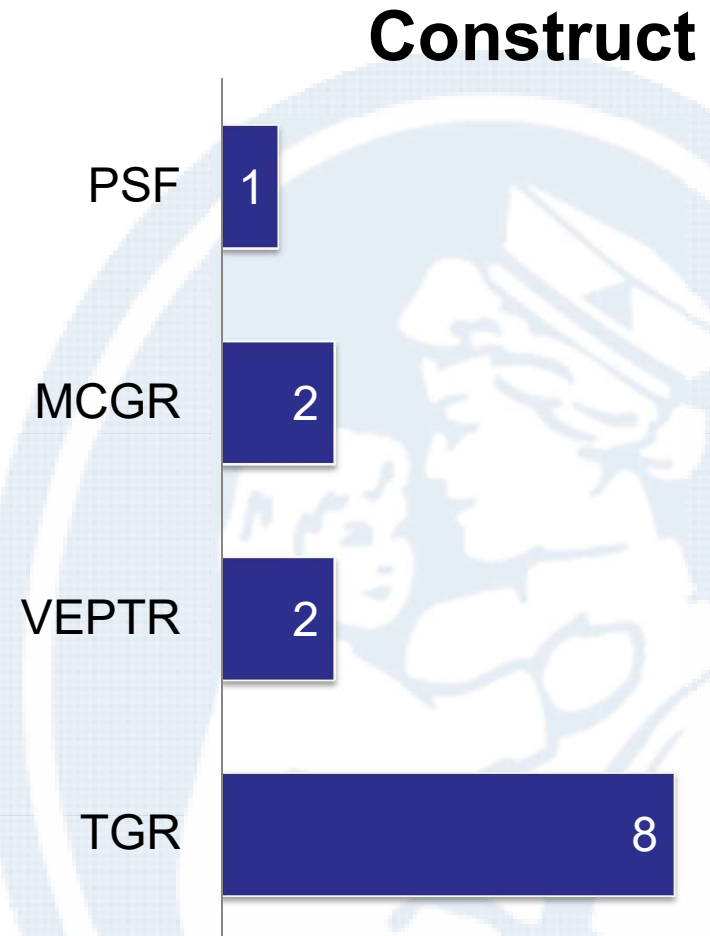
GFI

5.7 years (2-10.2)

9.2 lengthenings (2-18)

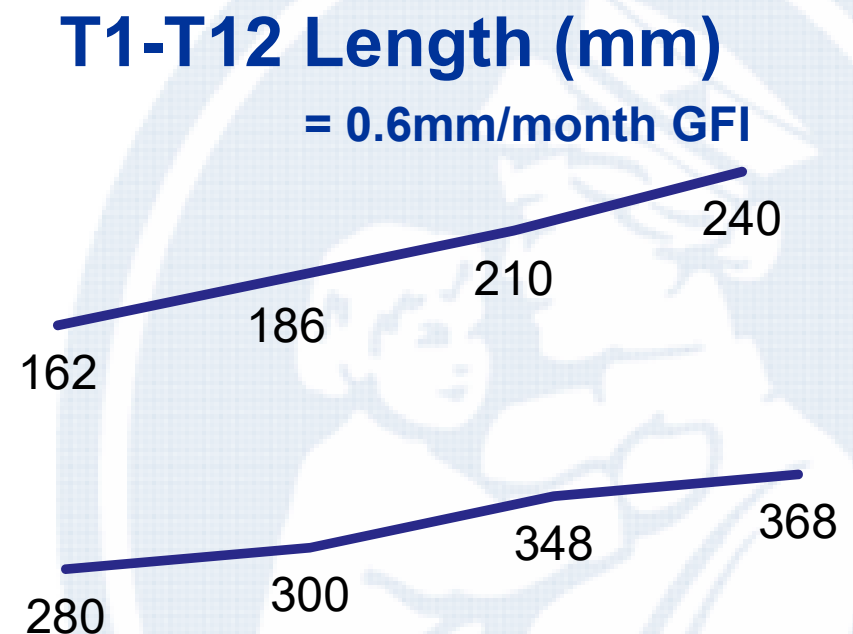
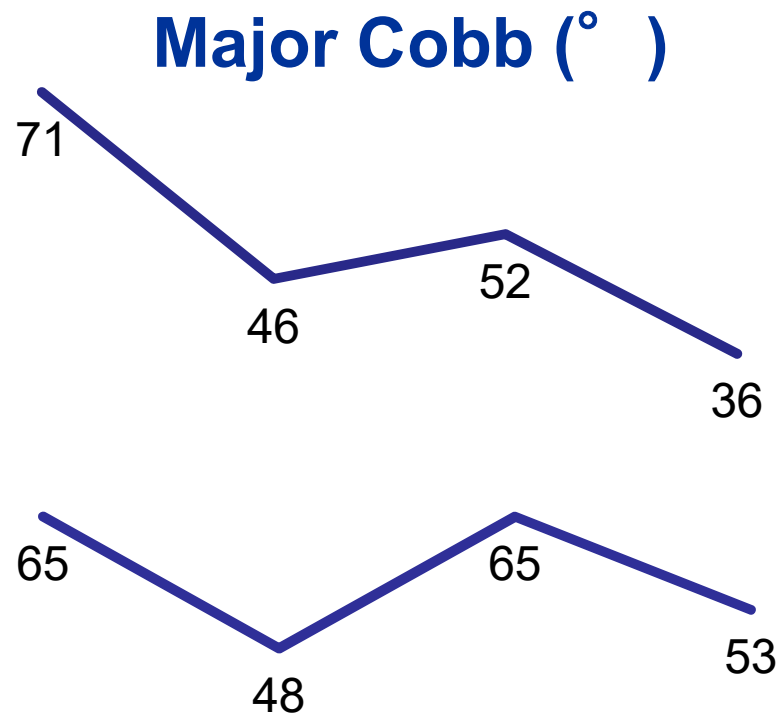
Follow-up

7.2 years (2.1-14.9)



Results: Growth-Friendly Surgery

Pre-index → Post-Index → Last GFI → Post-Fusion



Results: Adverse Events

26 complications (mean 2.0)

Most common

Rod fractures (n=9)

Infections (n=6)

Persistent pain (n=2)

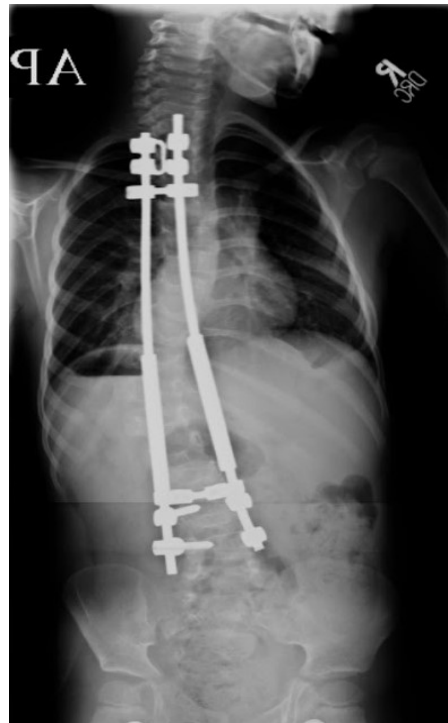
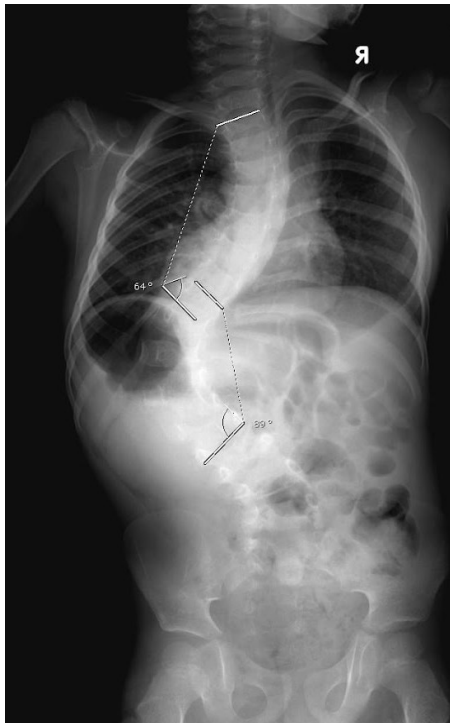
24 revisions (mean 1.8)



Results: Definitive Fusion

Posterior Fusion: n=4

Mean age: 11.9 years



GFI duration: mean 7.5 years (range 5.1-10.2)

Conclusion

1st study of GFI in Sotos and EOS

Heterogeneous population

Age, severity, management

GFI is effective

Prevents curve progression

Supports thoracic growth

Complications

Likely not syndrome-specific

