

Performing a Definitive Fusion in Juvenile CP Patients is a Good Surgical Option

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Disclosures

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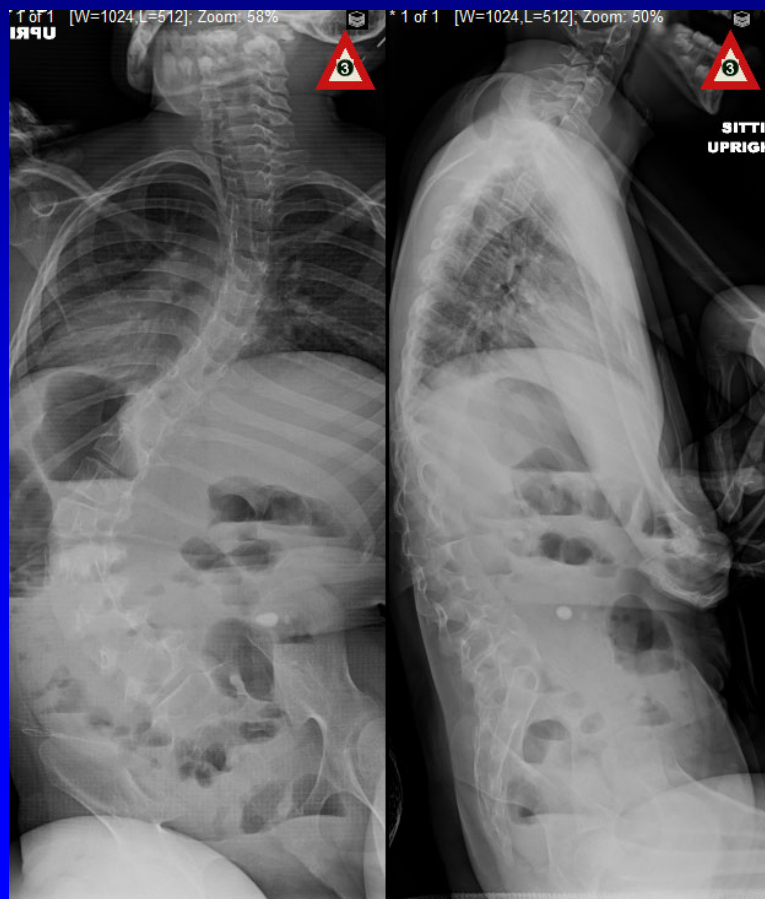
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- a. Grants/Research Support**
- b. Consultant**
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- e. Other Financial Support**



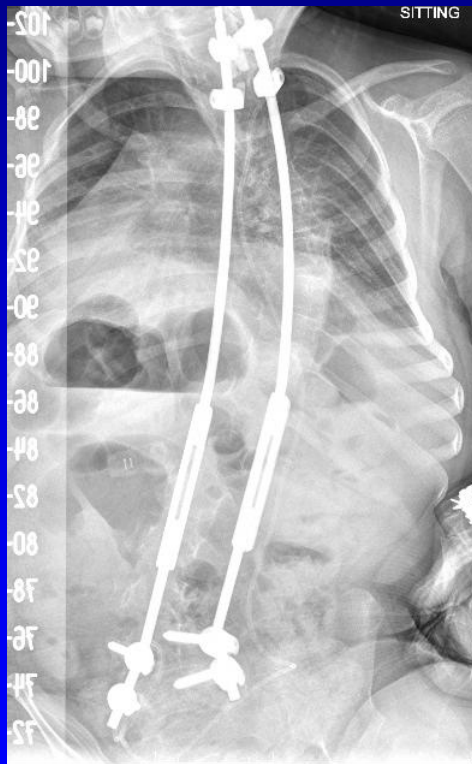
Introduction

- **Management of juvenile CP patients with large scoliosis is a challenge.**



Introduction

- **When observation with or without a brace is no longer an option, surgeons frequently choose surgery**



Growing Construct

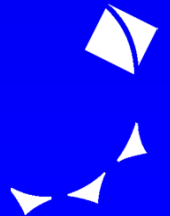
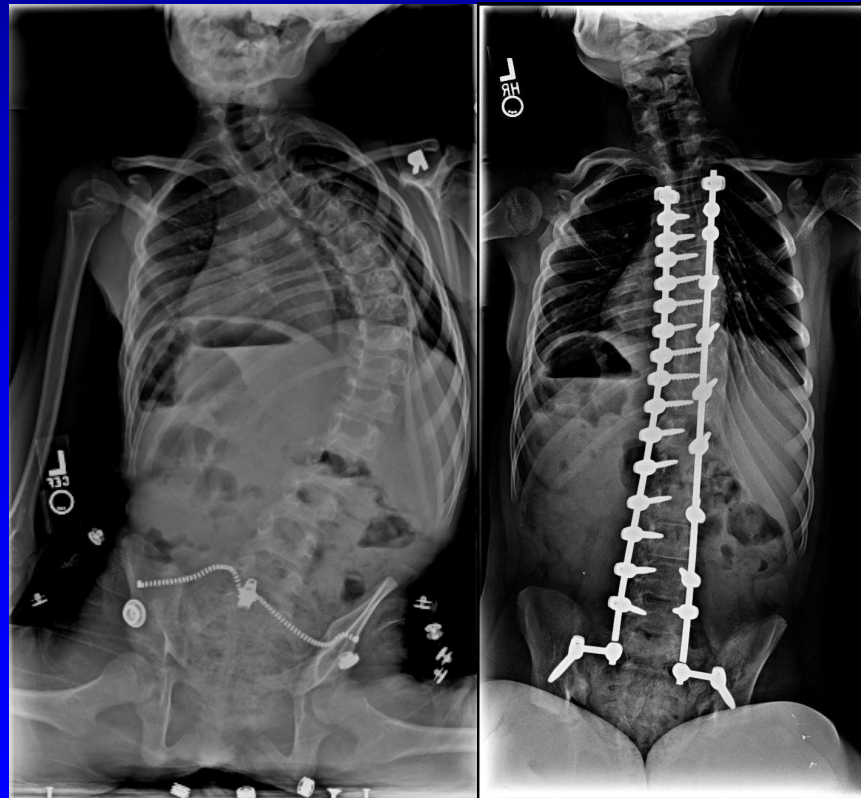


Final fusion



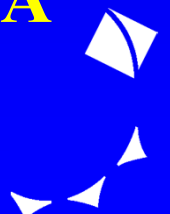
Purpose

- The purpose of the study is to present a series of juvenile CP scoliosis patients that underwent early definitive fusion.



Methods

- **A retrospective review of a multi-center database of patients with CP scoliosis was conducted.**
- **Patients ≤ 10 years who had a definitive fusion for their scoliosis and minimum 2 years follow-up were included.**
- **Preoperative and postoperative demographic and radiographic changes were evaluated with descriptive statistics. Repeated measures ANOVA were utilized to compare outcome scores.**



Results

- **15 patients were identified**
 - Average age 9.7 years (8.2-10.7 yrs)
 - All patients were skeletally immature with open triradiate cartilage
 - **Surgical Approach**
 - Posterior spinal fusion only: 14 patients
 - Anterior/Posterior fusion: 1 patient
- 3 patients had unit rods with wires while the rest incorporated pedicle screws.



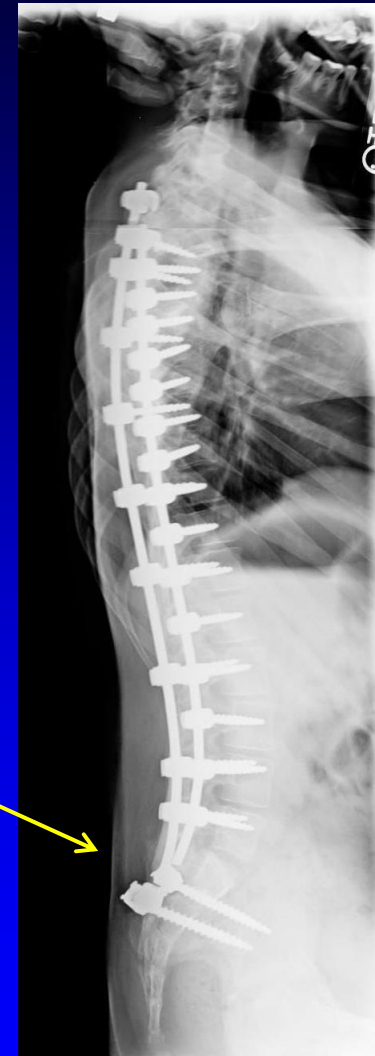
Radiographic Data

	Pre-op	1 st Post-op	2yrs Post-op	p-value (Pre-1 st post-op)	p-value (Pre-2yrs)
Major Cobb (M \pm SD)	87 \pm 30°	25 \pm 16°	29 \pm 17°	≤ 0.001	≤ 0.001
Avg. % Correction	--	77%	67%		
Pelvic Obliquity	28 \pm 14°	4 \pm 4°	8 \pm 8°	≤ 0.001	≤ 0.001
Avg. % Correction	--	86%	71%		



Results

- **None of the patients required revision surgery for progression.**
- **1 patient had a deep infection requiring a return trip to the operating room.**
- **1 patient had a broken rod that did not require further treatment.**
- **From pre to 2yrs post-op, the CPchild Health outcome scores improved from 45 to 58 ($p=0.004$).**



Conclusions

- **Progressive scoliosis refractory to conservative measures in juvenile CP patients can be a challenge**
- **Balance the need for further growth with the risks of progression or repeated surgical procedures.**
- **Definitive fusion is a viable treatment in these skeletally immature patients.**



Limitation

- **Further follow-up is needed to determine whether those results are stable to skeletal maturity.**

