

Growing Rods for Early Onset Scoliosis and Its Complications. A Retrospective Study of 129 Pts with 10 Yrs F/U.

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Disclosures

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3rd International Congress on Early Onset Scoliosis and Growing Spine, Istanbul , November 20 – 21, 2009

Introduction

- **Single Growing Rod**
- **Harrington and Ascani Instrumentation**
- **Subfascial Implantation**
- **Repetitive Operation every 6 Months**
- **Orthosis until Definitive Posterolateral Fusion**

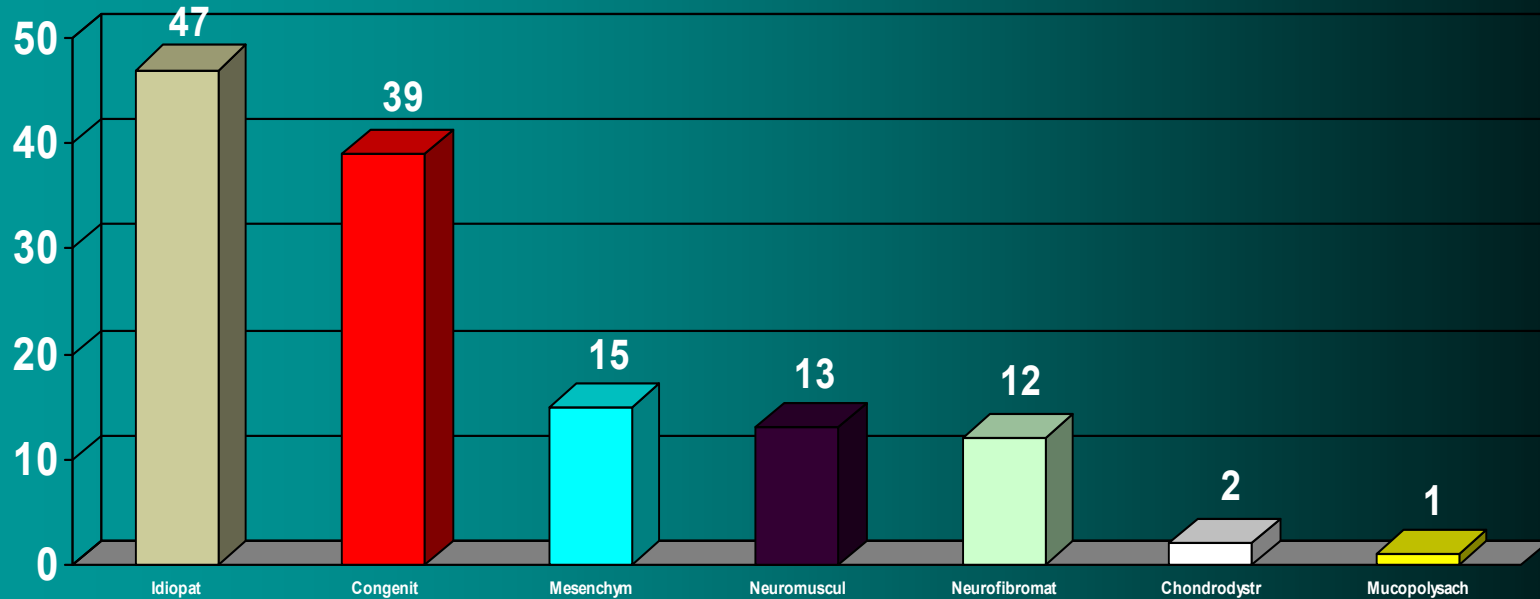
Purpose

- **Retrospective Study of Patients with EOS Treated by a Single Growing Rod**
- **Evaluation of Advantages and Disadvantages of This Method**
- **Referring to Repetitive Operation of Specified Complications**

Material and Methods - Pts File

■ Treated between	1980 – 1999
■ Number of Patients	129
■ Average Age of Operations	6 1/2 Yrs (2 - 15)
■ Average Degree of Deformity	70° (45 - 150°)
■ Average Number of Operations	5,5 Times (2 - 23)
■ Average Treatment Period	5,5 Yrs (1 - 13)
■ Average Percentage of Correction	47% (5 - 80%)
■ Average Definitive Correction	46% (8 - 80%)
■ Minimal Follow Up	10 Yrs

Material and Methods - Etiology



Idiopat

Congenit

Mesenchym

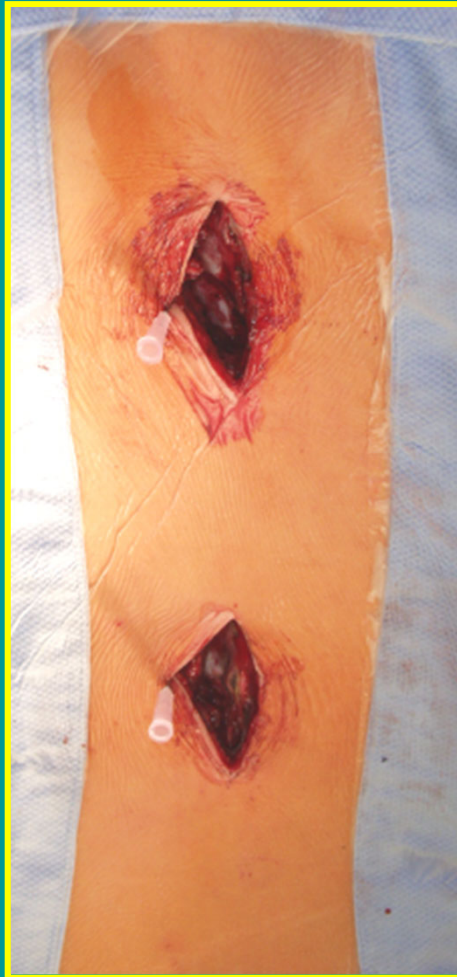
Neuromuscul

Neurofibromat

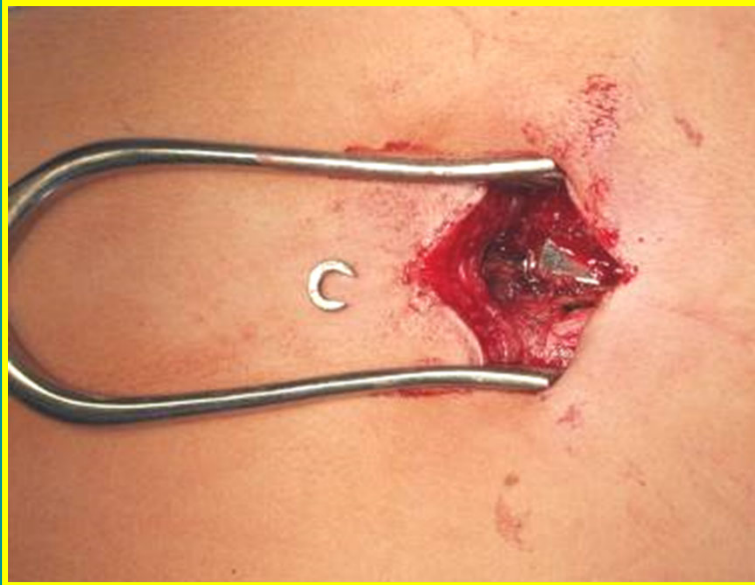
Chondrodysr

Mucopolysach

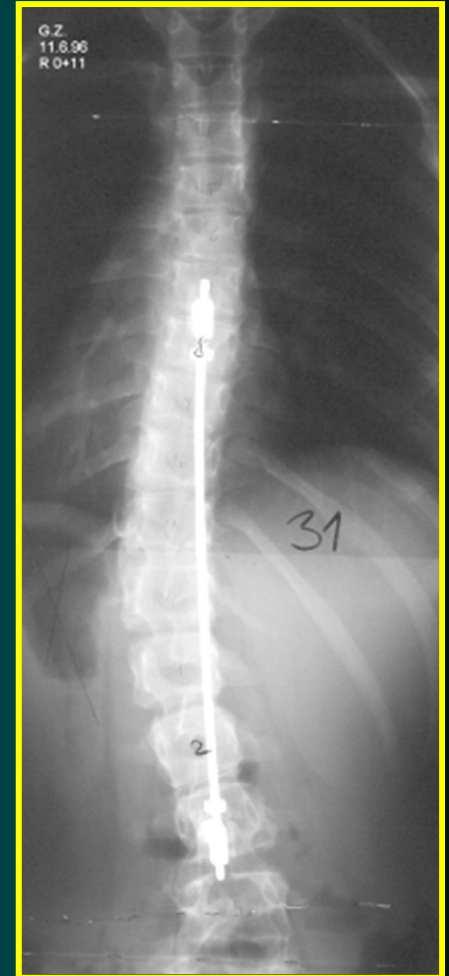
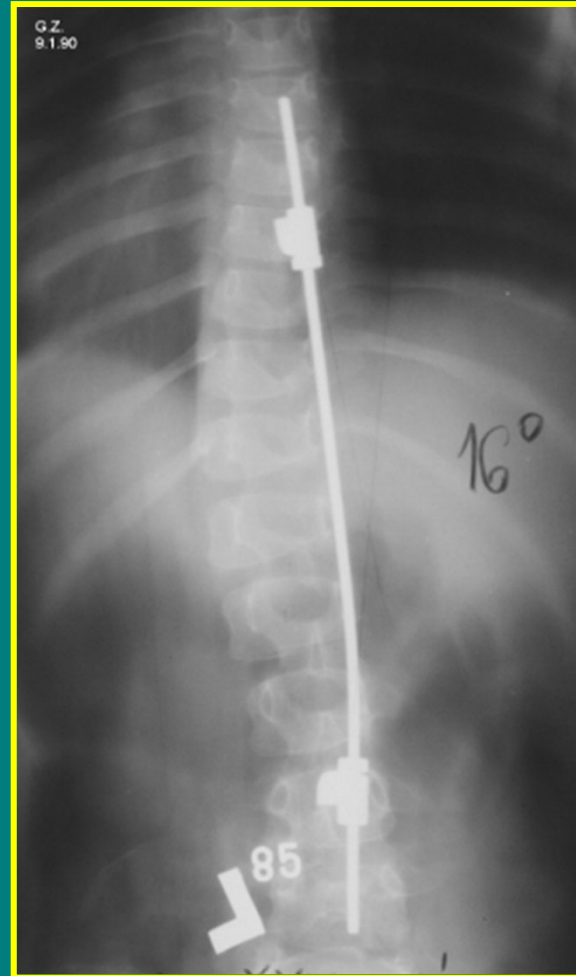
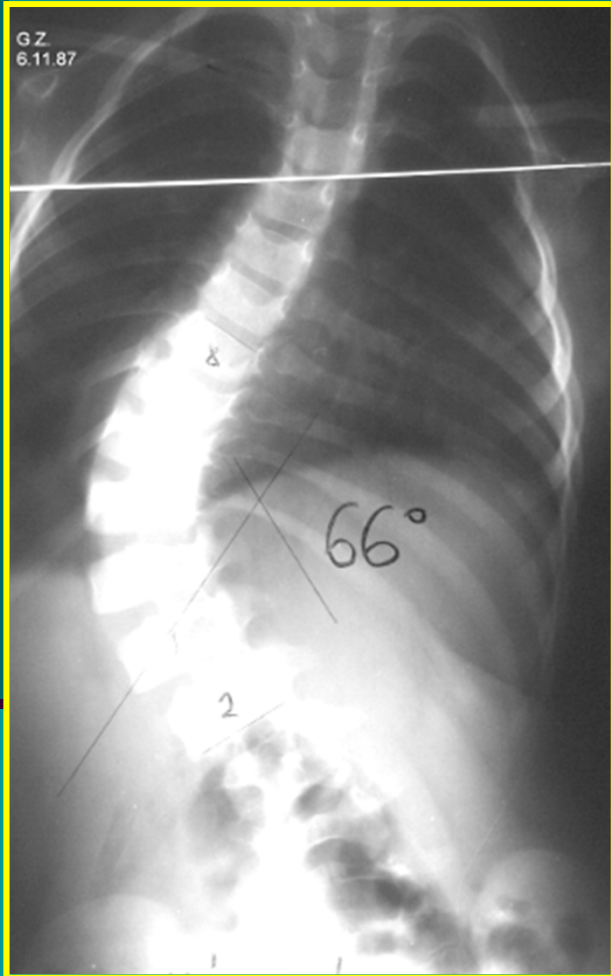
Material and Methods - Operations Process



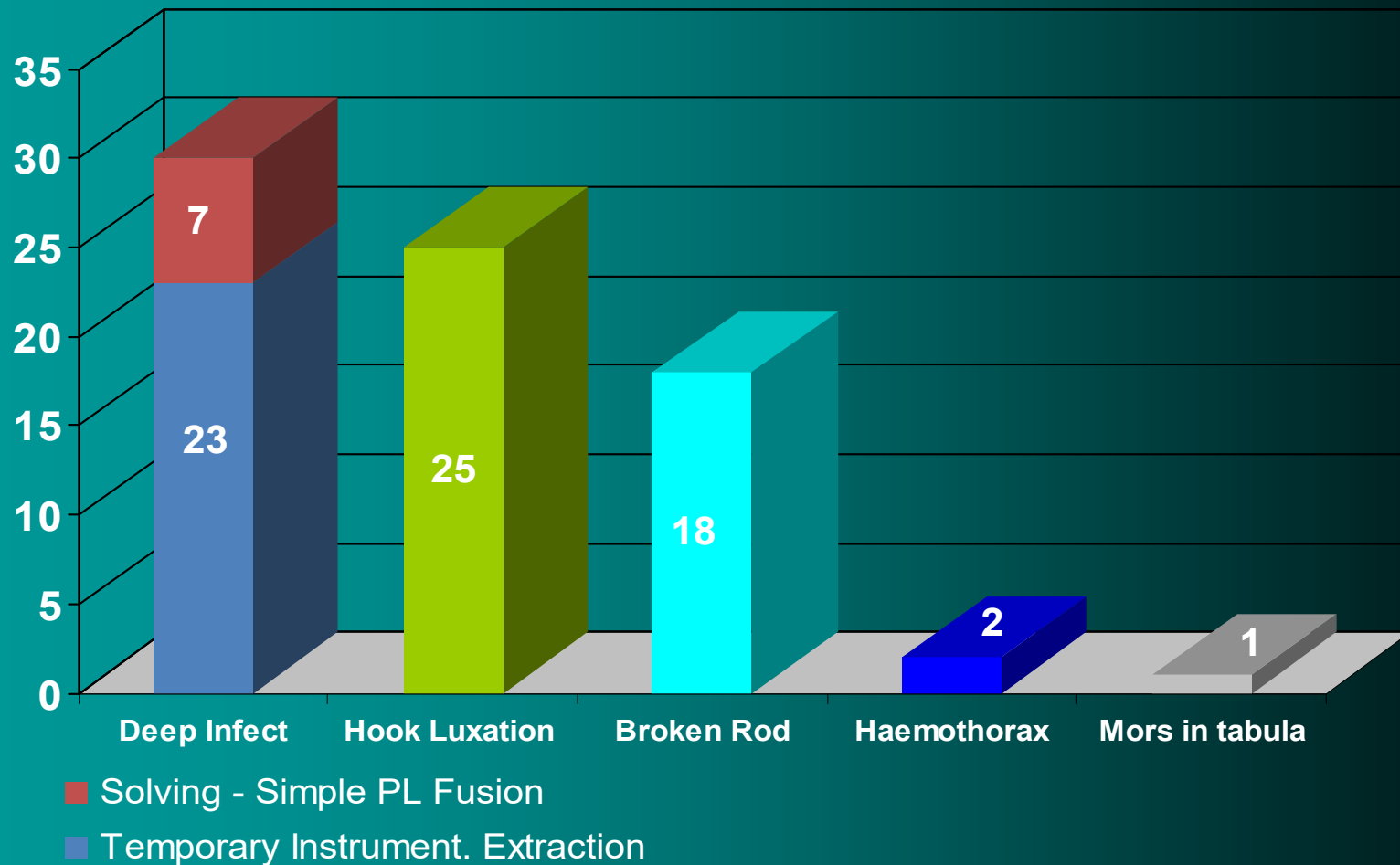
Material and Methods - Operations Process



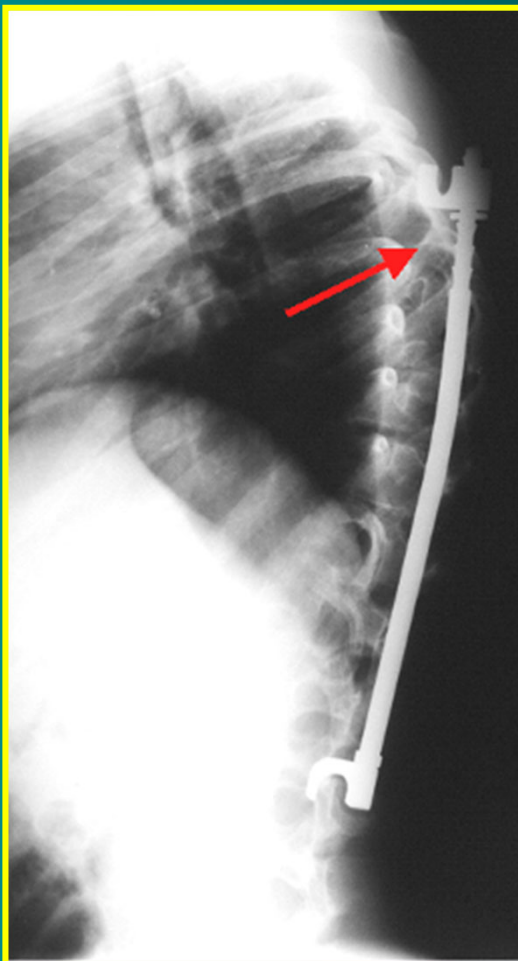
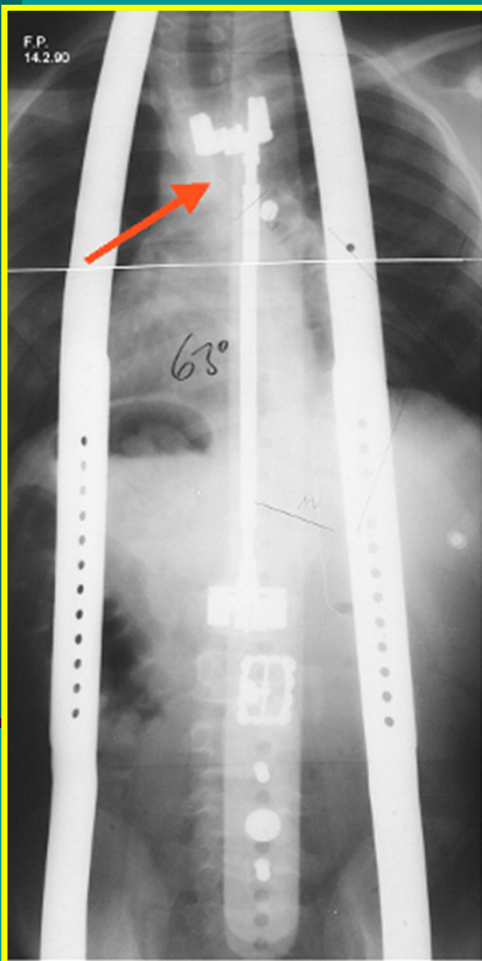
Results - X ray



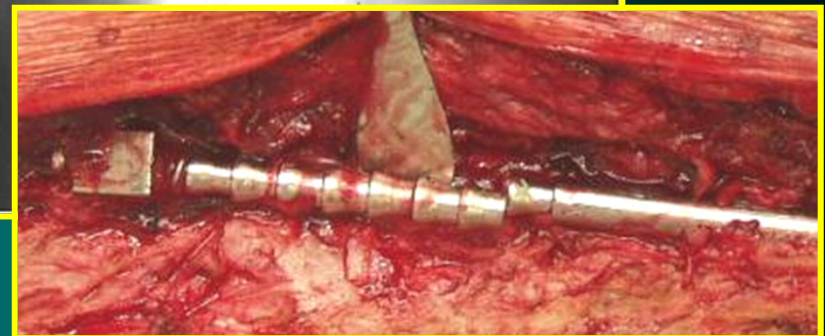
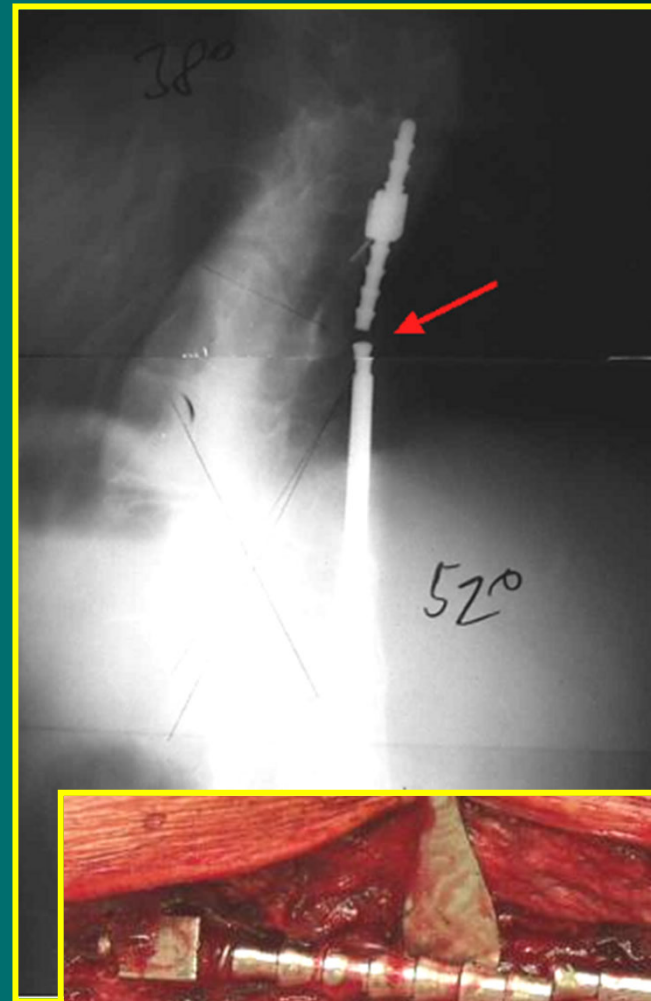
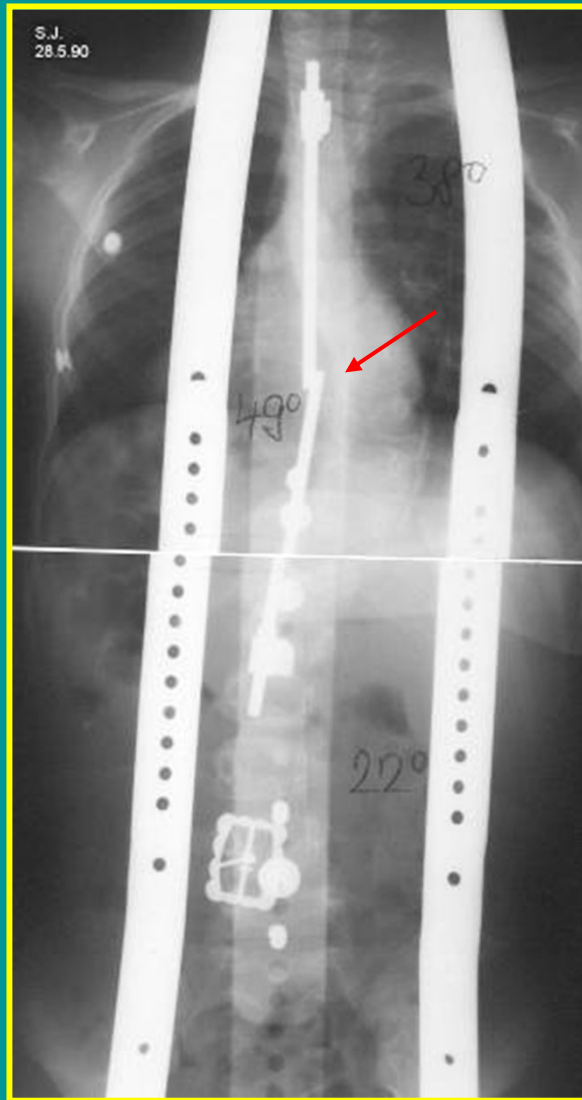
Results - Complications



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Results - Complications



Results - Complications

■ Deep Infection	30x	23%
■ Luxation of Upper Hook	25x	19,5%
■ Broken Rod	18x	14%
■ Others	3x	2,5%
■ Total		59%

Discussion

Advantages

- Good Correction of Deformity
- Possibility of Later Spondylodesis
- Simple Instrumentation
- Short Time of Surgery
- Minimal Blood Loss

Disadvantages

- Repeated Surgeries
- Lordotisation and Setting of Distracted Segment
- Truncal Brace During the Whole Time of Treatment
- HIGH RISK OF COMPLICATIONS:
 - Dislocation of Upper Hook
 - Broken Distraction Rods
 - Deep Infection

Conclusions

- new instrumentation for single rod distraction
 - using solid rod with opportunity of rod forming self fixation hooks
- two rods instrumentation for repetitive operations
- new ideas no repetitive operations' required (Socore, Shilla)

