
Neurological Complication After Growing Rod Lengthening and Implants Exchange Resolved After Urgent Shortening: A Case Report

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Patricia Kostial	No Relationships

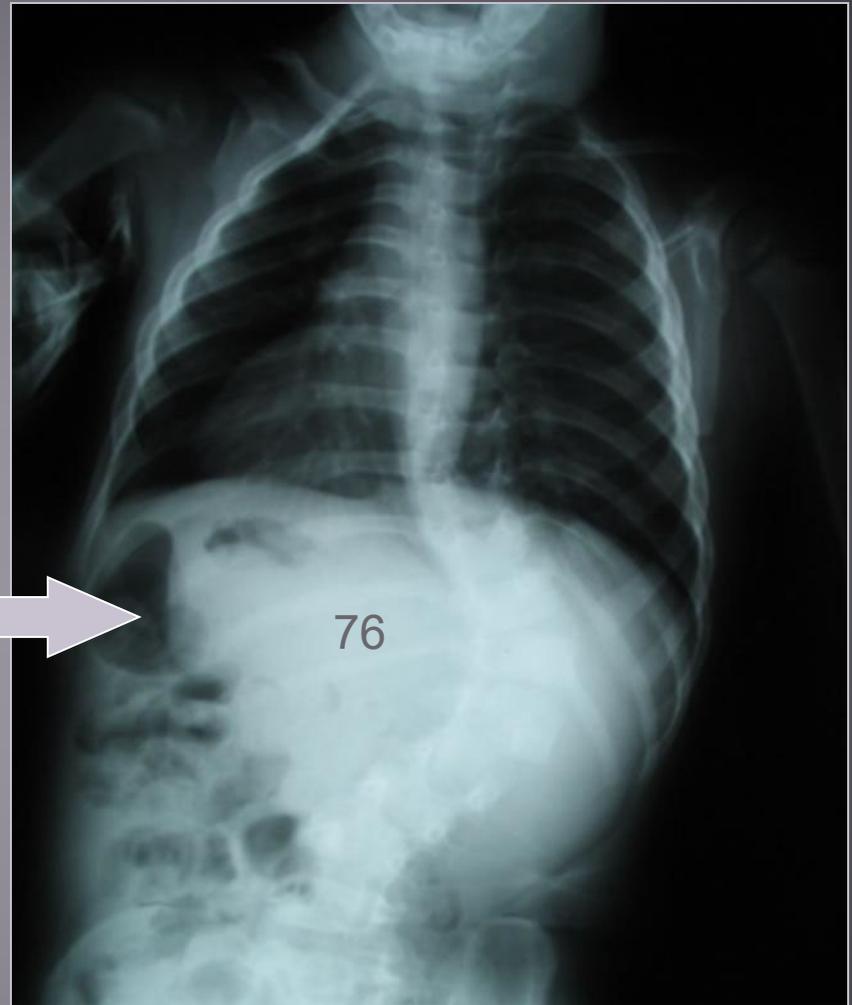
- (a) Grants/Research Support
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- (e) Other Financial Support

Introduction

- Growing rod technique is commonly used for treatment of early onset scoliosis
- Limited fusion at the level of anchors and periodic lengthening allows the spine to grow until satisfactory growth achievement
- Neuromonitoring is commonly performed at least at index surgery and implant exchange
- However, neurological events during growing rod surgeries are rare
- In this report, we present a case of an unusual transient neurological deficit after growing rod lengthening and implant exchange

History

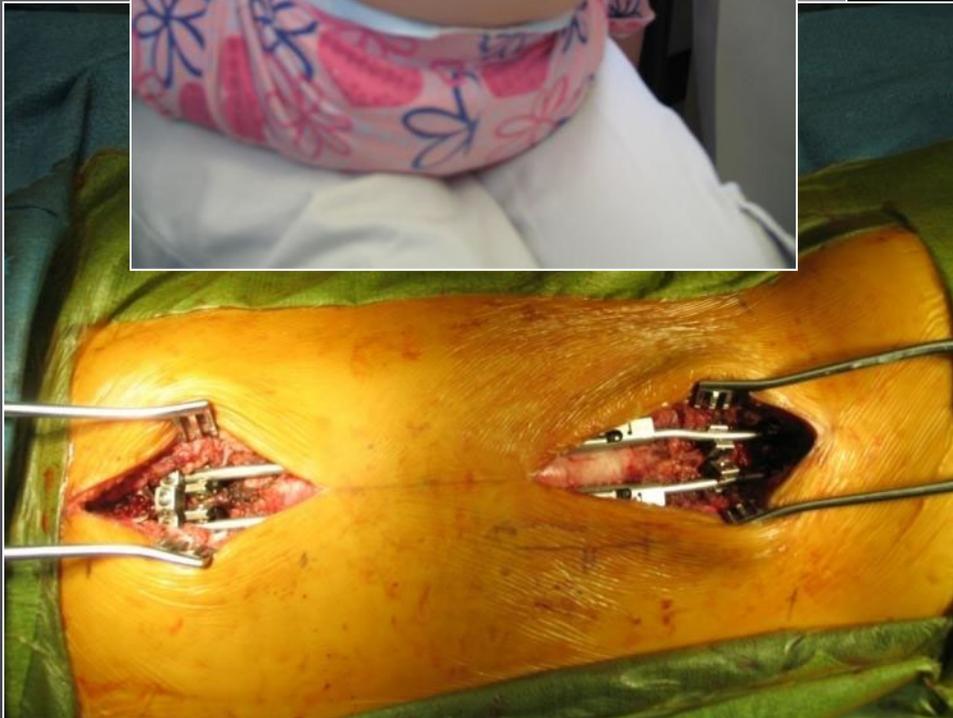
- 5+2 yr girl, Infantile Idiopathic Scoliosis
- Primary growing rod instrumentation at the age 19 months
- Has had 6 uneventful subsequent lengthenings and revisions without any neurological events
- In her 7th lengthening underwent both upper rods and connectors exchange
- Revision was done through two small incisions over the upper foundation and middle connectors
- Intra-operative neuromonitoring was normal

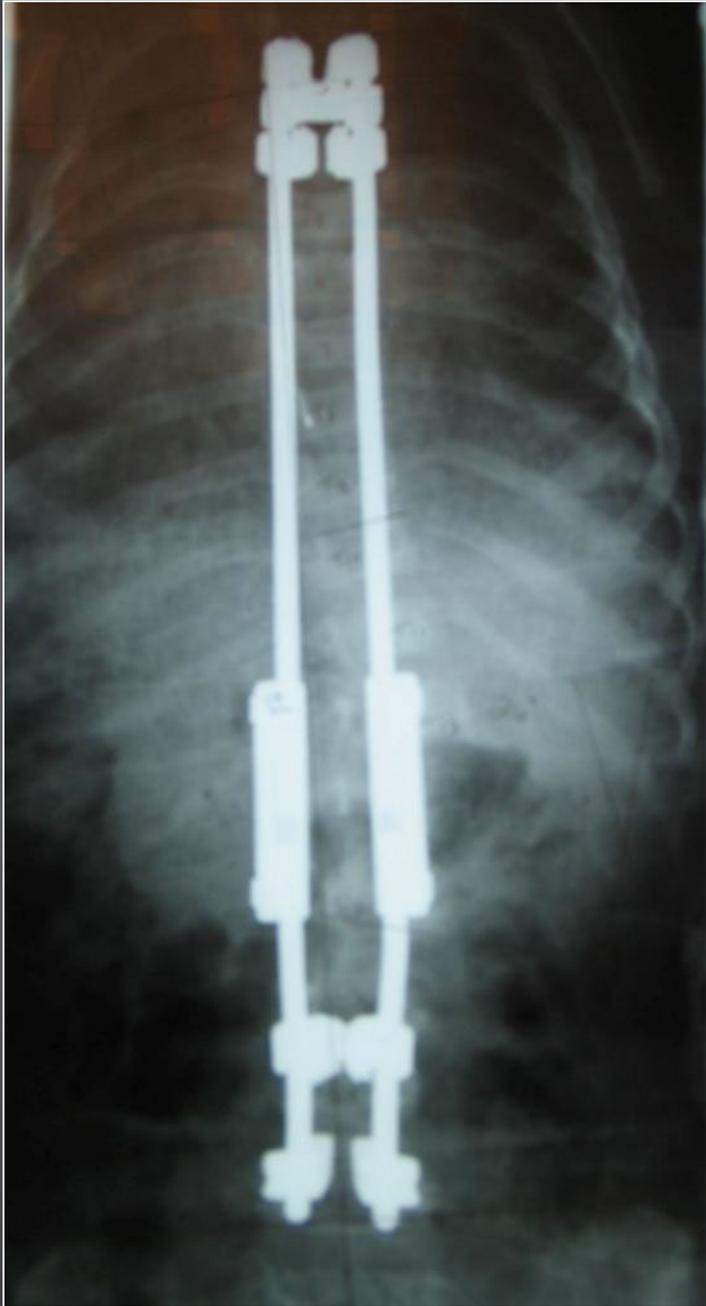


19 months old girl with curve progression in 6 months

Initial pre-op

Age 19 months





Post-op



History

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Post-Lengthening Status

- More pain than expected for this procedure, reduced with increase of pain medications in the hospital
- Discharged one day after surgery, parents did not report anything unusual until post-op day 7 reporting abnormal gait

Ph/Ex:

- She walked on her tiptoes and could only stand with both hips and right knee flexed
- DTRs exaggerated, positive SLR on right side

Radiographic Evaluation

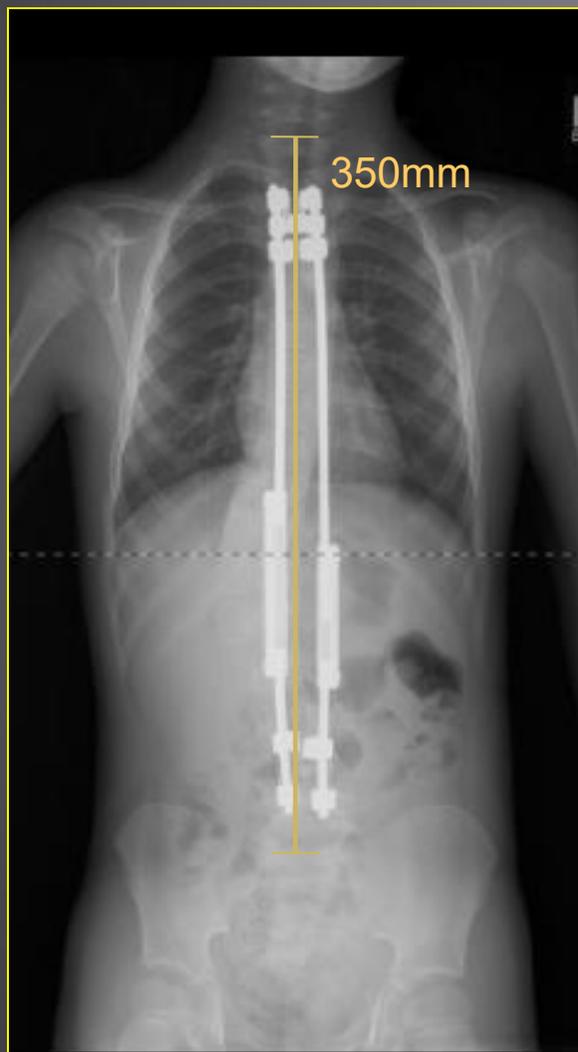
- No evidence of rod fracture, implant dislodgment



Age
5+2

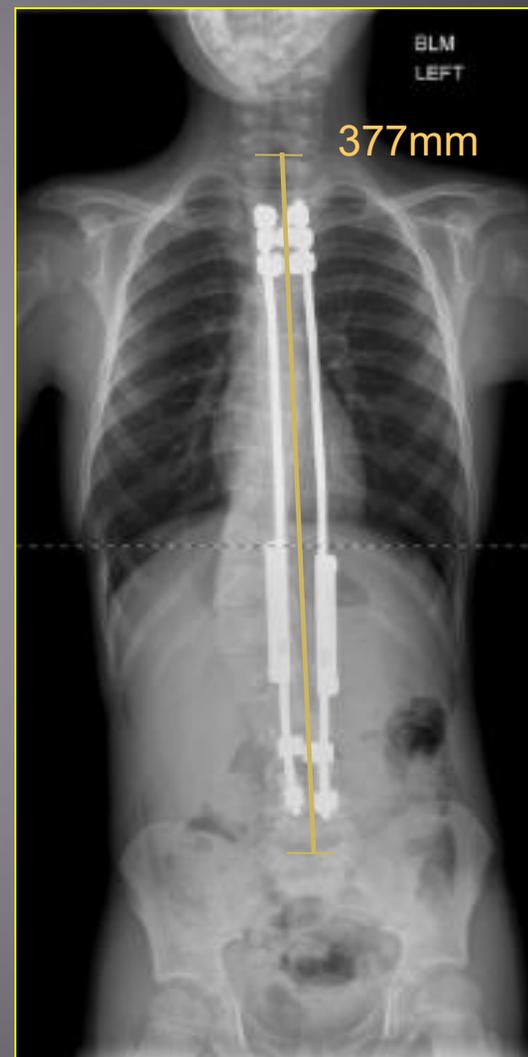


Radiographic Evaluation



Pre-lengthening

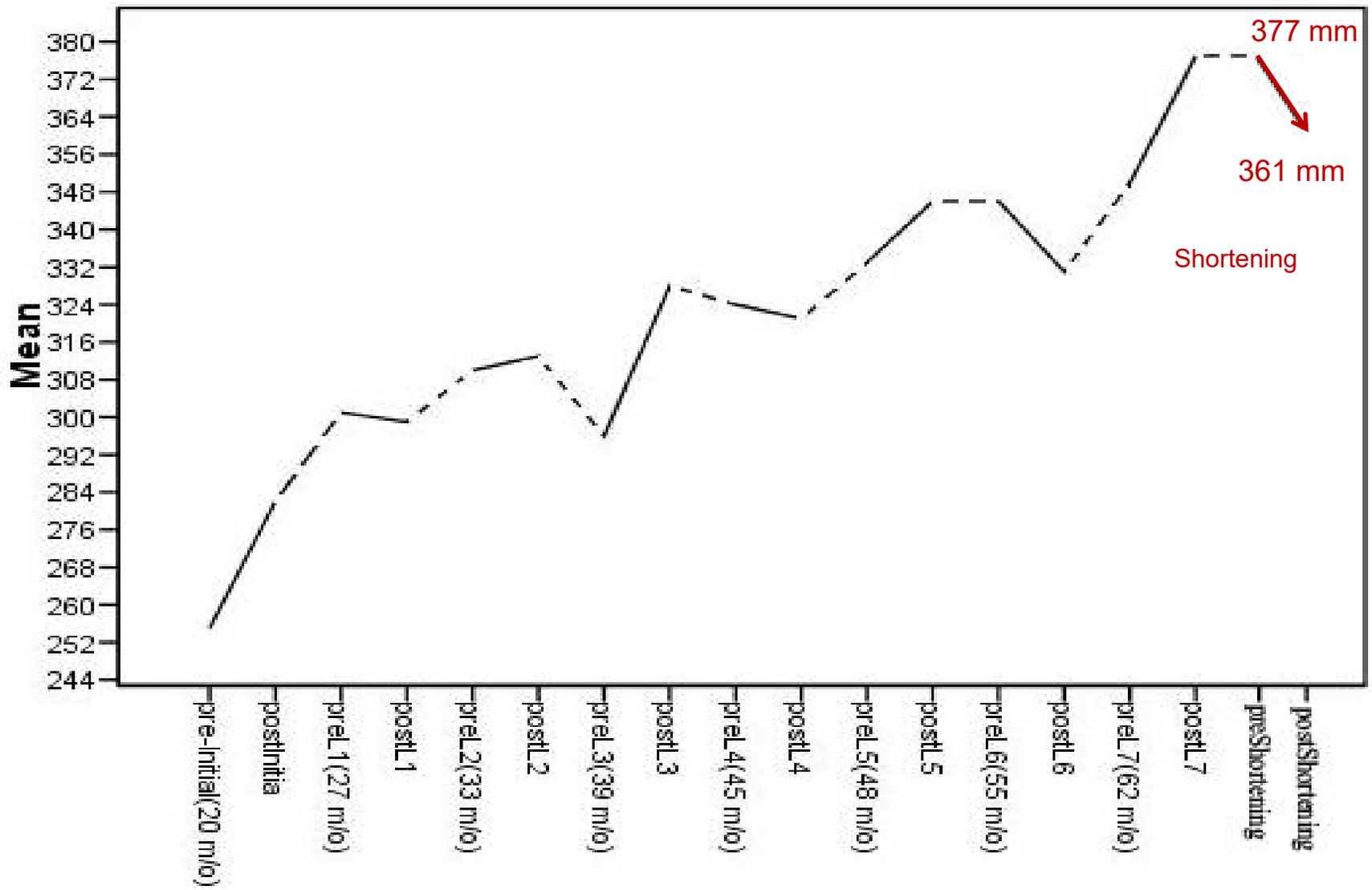
27 mm of
lengthening



Post-lengthening

Follow Up

- Was taken to OR and shortening of 16 mm was done
- One-week after shortening most symptoms resolved
- Occasional right leg pain to the foot, described by her mother as a mild pain not requiring medication
- This also resolved after one month
- The patient's gait became normal



Conclusions

- Neurological complications can occur with growing rod surgeries when implants are exchanged
- When implants are exchanged, it is safer to keep the implants on one side in place while the opposite side is being exchanged and do the exchange one side at a time
- We should think of neurologic complications post surgically even with normal neuromonitoring
- Neuromonitoring is still recommended for initial and implant exchange procedures and perhaps even lengthenings

Thank You