Case Review:

Adolescent Idiopathic Scoliosis in 21 year old male treated with a Posterior Spinal Fusion T3-L1

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Patient History

- 21-year-old male
- Patient presented at 15 years of age, with a 19° curvature.
- His curve is a progressive. Over the six year period, the curve progressed from 19° to 50°
- At time of surgery, the patient had a 50° thoracic and a 45° lumbar curve.

Pre-op X-rays

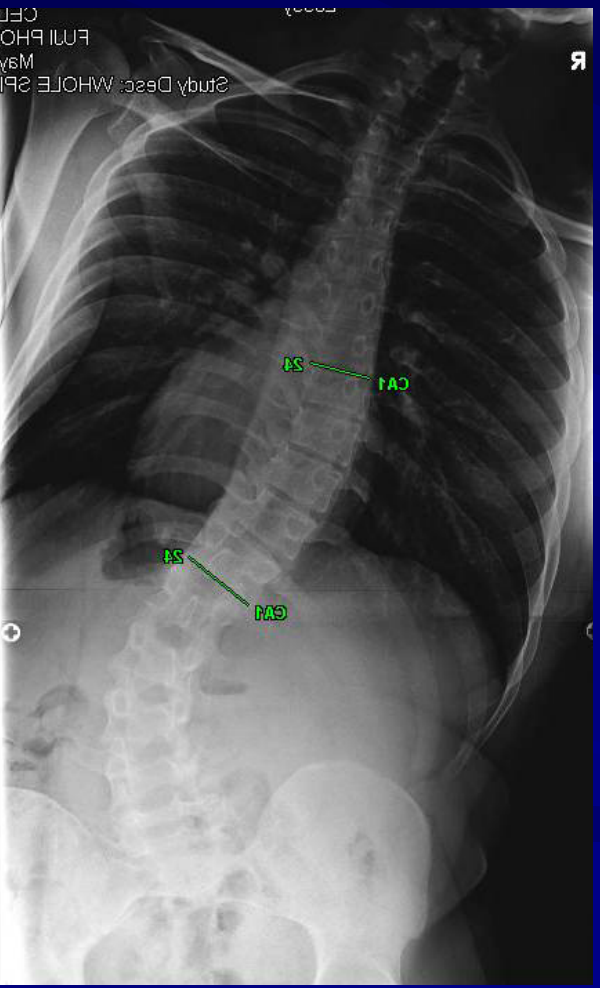
June 2004

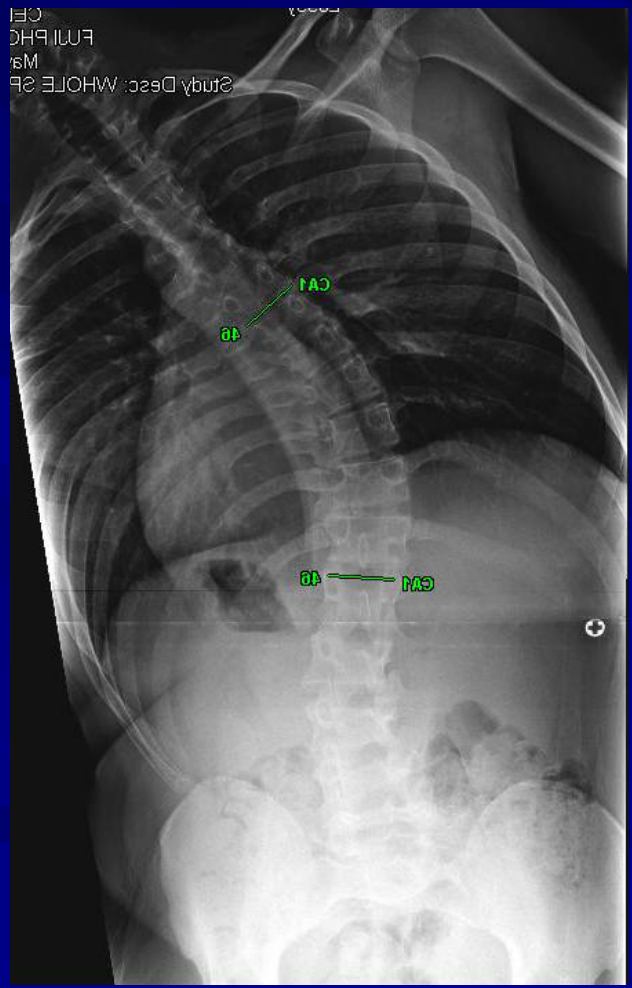
June 2005

May 2006

May 2007

Bending X-rays





The curves is classified as a 3C negative curve because of the significant amount of lumbar rotation and deformity that did not bend out. The curve remained to the left of midline. The truncal shift caused significant deformity proximally, although moderate rotation of the thoracic spine was seen. This necessitated concave osteotomies for removal of the facet joints to mobilize it centrally.

Indications for Surgery

- Adolescent Idiopathic Scoliosis, type 3C negative
- 50° thoracic, 41° lumbar curve with significant rotation.
- Progressive scoliosis.
- Severe thoracic and lumbar hypokyphosis.
- Low back pain,
- Progressive and cosmetic deformity.

Surgical Strategy

1. Segmental spinal instrumentation T3 to L2 using CD Legacy stainless steel 5.5 pedicle screw-rod construct.
2. Posterolateral transverse fusion and central fusion using a combination of autogenous bone and allograft, T3 to L2.
3. Spinal osteotomy concave with removal of fact joints for mobilization of severe decompensated truncal shift of curved thoracic spine, T4 to T11.
4. Intraoperative somatosensory evoked potential and motor evoked potential interpretation.
5. Intraoperative fluoroscopy.

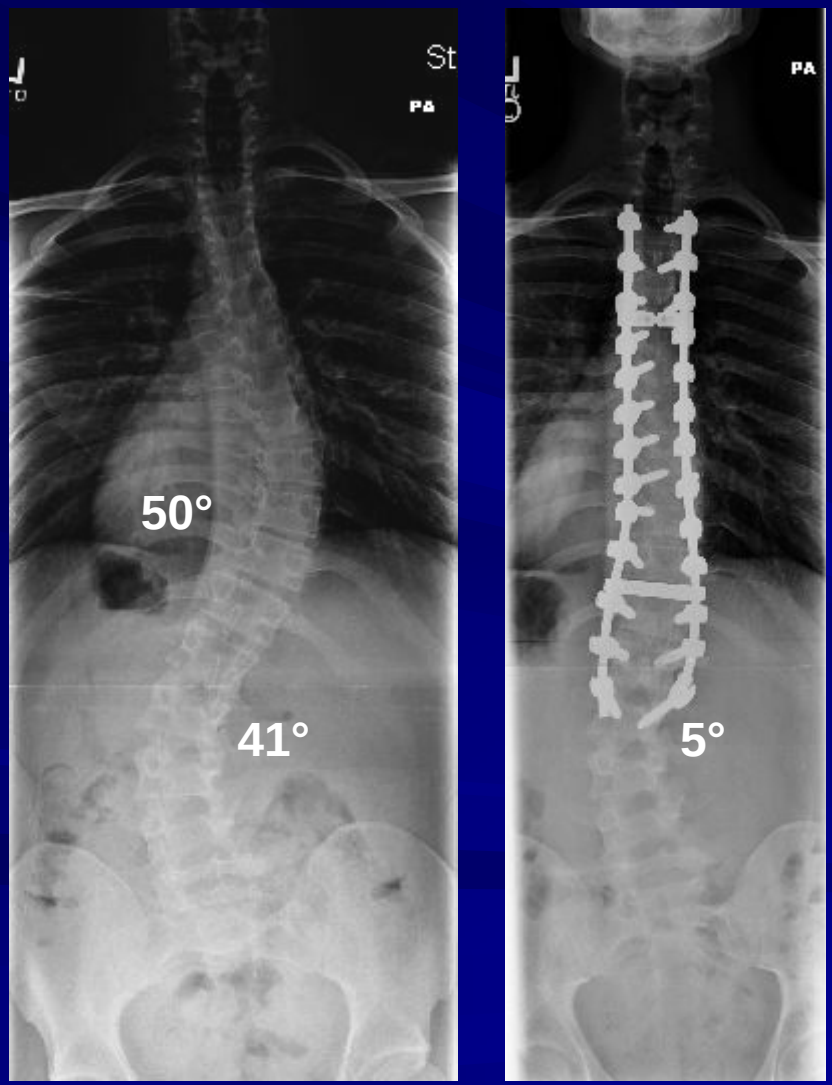
Interop Findings

The bone was generally of good quality. There was discoloration of the bone implying past possible tetracycline usage and/or intrinsic bone issue, although it is unlikely. The periosteum was fused to the bone. Therefore, strictly speaking, this was not an adolescent curve, as the patient is older. The patient had significant khypokyphosis in the thoracic and lumbar spine with almost a horizontalized sacrum.

Post-Op Films

The patient did well post-operatively, and is happy with his outcome. He resumed weight lifting at six months post-operative.

Pre-Op/Post-op Comparison



An excellent correction was obtained.
The patient is well balanced.

Pre-Op/Post-op Comparison