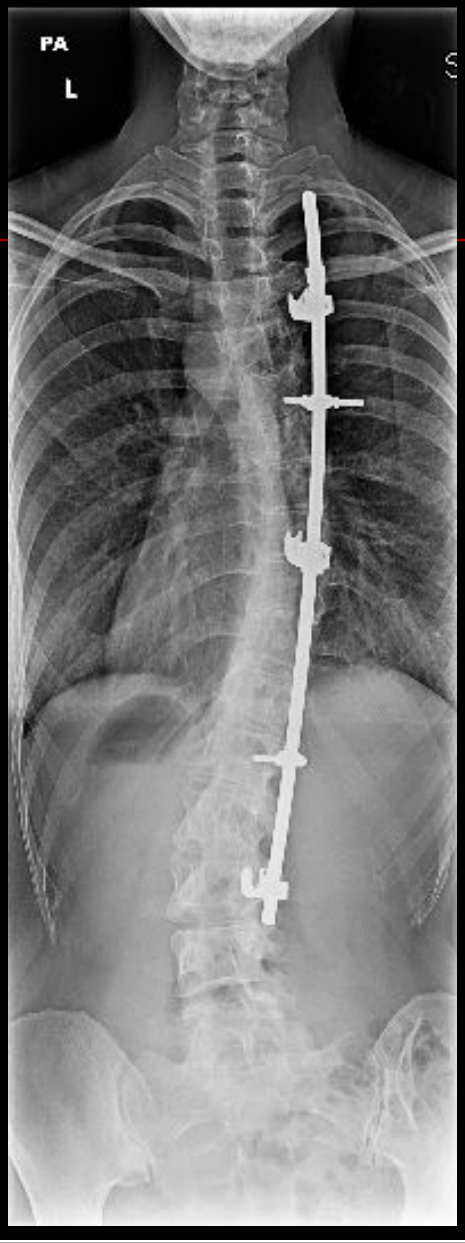

Case Review:

A 29 year old woman presented with dislodged hardware, status post three surgeries for Adolescent Idiopathic Scoliosis.

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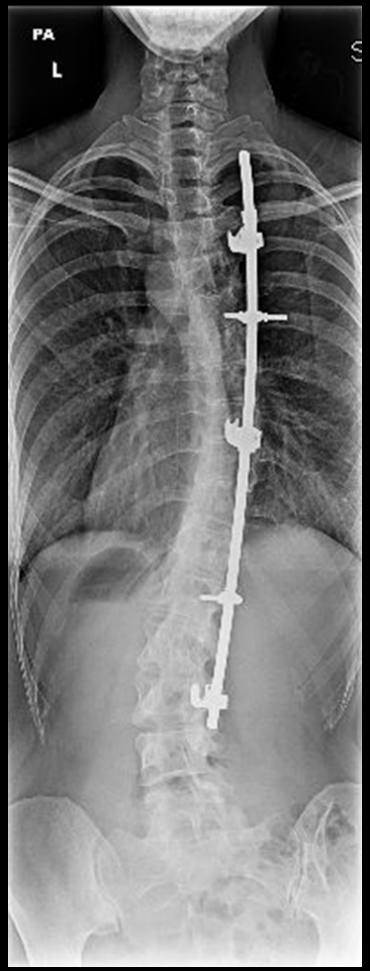
Patient History

- 29 year old female
- The patient is status post 3 operations from the age of 3 to 15.
- This was done in Estonia and then ultimately in Finland.
- She had a posterior spinal fusion for adolescent idiopathic scoliosis that ultimately got infected, was redone, reinstrumented and half the instrumentation was ultimately removed.
- The patient has noted increase of pain and deformity with rib prominence as rotation has increased. The painful apical segments over the ribs are associated also with some low back pain.

Pre-op X-rays



The retained hardware has disassociated from her spinal column is loose underneath her. I told the patient that this loose instrumentation is dangerous to her. That is, the pedicle hooks proximately are not connected to the spine and may be very close to the rib cage and her pleura, and it would be not be implausible that any sort of trauma to her can cause dislodging of the instrumentation and become a serious medical problem.

Indications for Surgery

1. Status post posterior instrumented fusion for adolescent idiopathic scoliosis x3.
2. Removal of hardware with infected wound.
3. Removal of half instrumentation, status post multiple operations for adolescent idiopathic scoliosis.
4. Now with retained hardware which is loose.
5. Rule out pseudoarthritis, thoracolumbar spine.
6. Rib prominence with pain over hemithorax, right hand side, apical thoracic curve.
7. Increasing low back pain and disability due to possible pseudoarthrosis, lumbar spine.

Surgical Strategy

- Removal of retained hardware, Cotrel-Dubousset instrumentation through osteotomy site, thoracolumbar spine.
- Multiple level spinal osteotomy for removal of hardware and regraft of pseudoarthrosis, T4-5, T5-6, T6-7, T12-L1, L1-L2 and L2-L3.
- Posterior spinal fusion regraft, L1 to L3.
- Segmental spinal instrumentation, L2-3, using pedicle screw/rod construct for through-and-through pseudoarthrosis, L2-3.
- Posterior spinal fusion using locally-harvested autologous bone graft and rib graft, L2-3.

Surgical Strategy – cont.

- Thoracoplasty with removal of 6 ribs over apical segment and thoracotomy, thoracic apex spine.
- Plastic closure of wound.
- O-arm neuro-navigation/interpretation with CT interpretation.
- Intraoperative somatosensory-evoked potential and motor-evoked potential interpretation

Post-op Films

- The patient did well immediately post-operative.
- She reported minimal pain.
- Postoperative x-rays show excellent balance of the frontal sagittal plane with instrumentation intact.

Pre-Op/Post-op Comparison