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Growing Rods Cannot Be Used In Patients With Kyphosis

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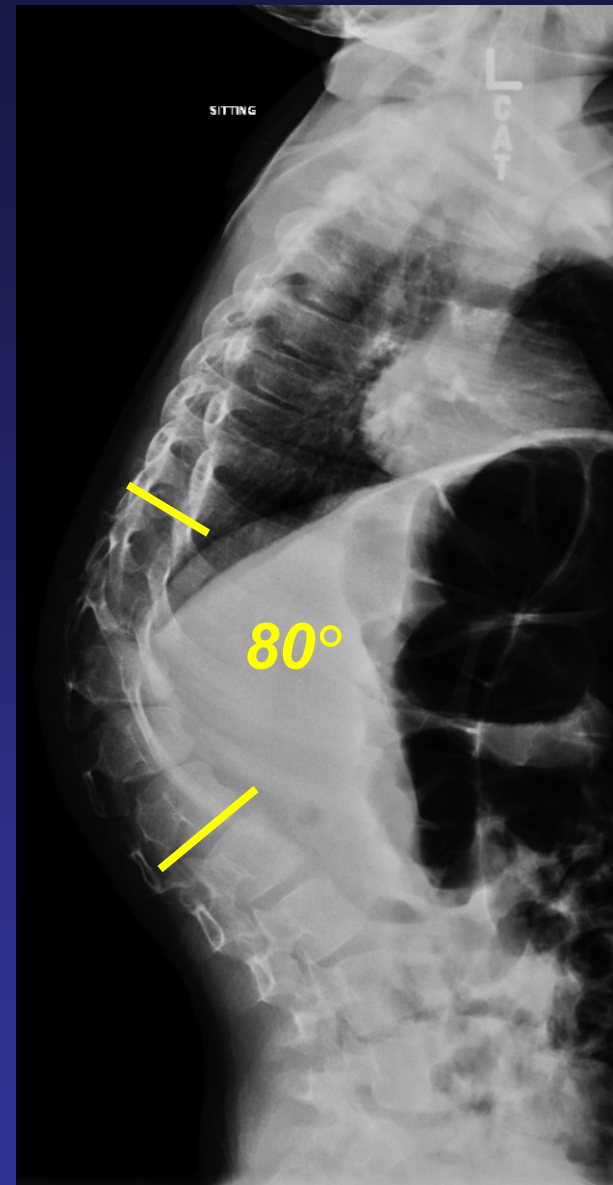
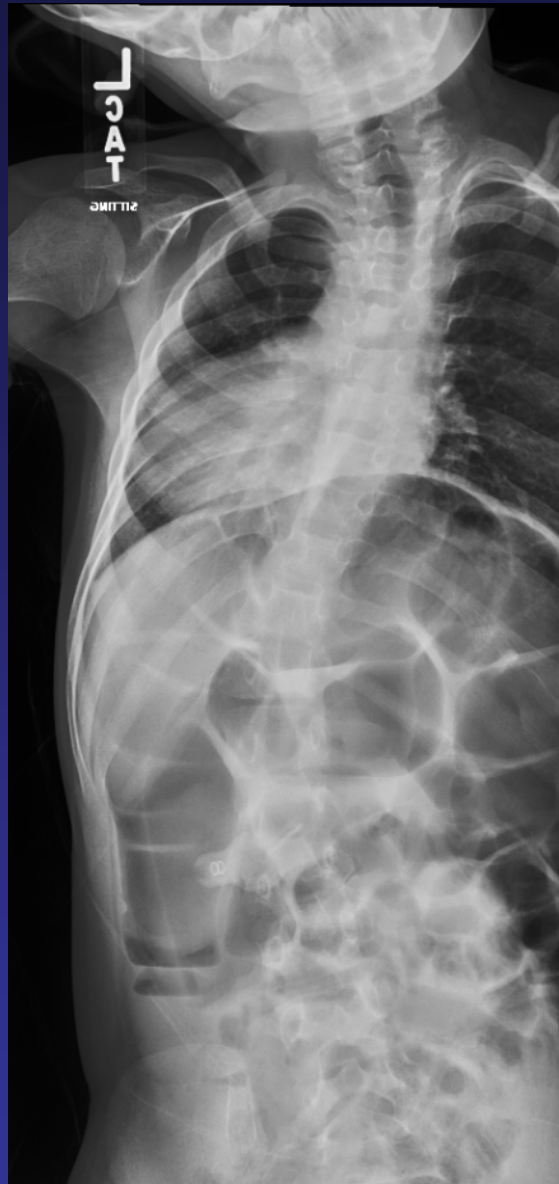
Disclosures

Unpaid Consultant – OrthoPediatrics

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CH 9.3 yo male with 6 p- syndrome 11 - 09
Ht 45" (112.5 cm), Wt 37# (16.8 kg)



Complications of Kyphosis in EOS

High risk for proximal foundation failure

- Both insertion and lengthenings
- Failure = increased proximal junctional kyphosis

Revisions difficult after failure

- Bone loss
- Small pedicles



Factors to Consider in Kyphosis

Anatomical Considerations

- Thin / small laminae and transverse process
Poor tolerance for increased stresses of kyphosis correction
- Short oblique / angulated pedicles
Increased risk of neurologic injury with posterior plowing



Biomechanical Considerations

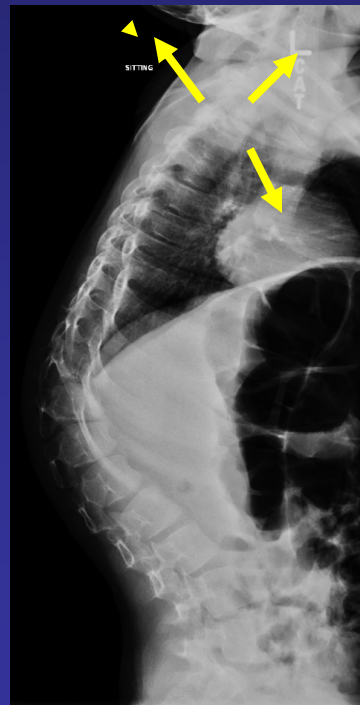
- High stresses on proximal foundation

Anterior kyphotic force

Posterior cantilever force

Distraction force

} ↑ *Risk for failure*



Conclusions

**Kyphosis is a relative contraindication
to the use of growing rods in EOS**

Consider alternative methods

- **Nonoperative**

Serial Risser casts

Orthoses

- **Operative ?**

To be discussed in the rebuttal





Thank You

