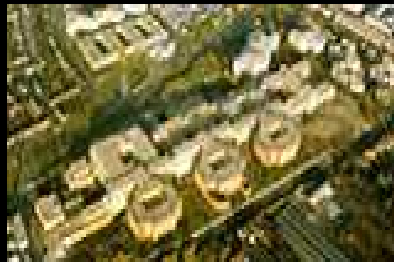


# PROXIMAL JUNCTIONAL KYPHOSIS FOLLOWING HYBRID INSTRUMENTATION IN AIS PATIENTS: A MINIMUM FIVE YEARS FOLLOW UP



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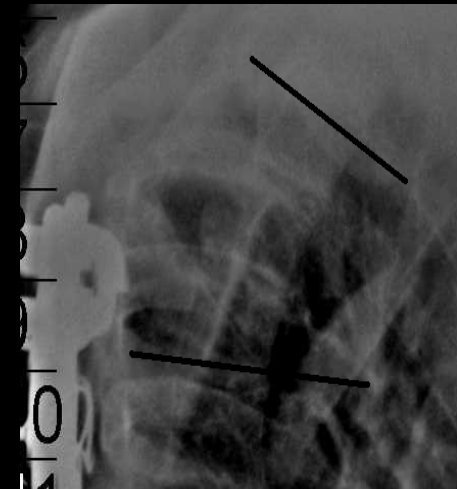
# Background



hybrid instrumentation (distal pedicle screws, proximal hooks) is discussed controversially in the literature as a risk factor for developing proximal junctional kyphosis (Kim et al, Spine 2005; Helgeson et al, Spine 2010)



aim of our study was to evaluate the incidence of pjk in our series of AIS patients with hybrid instrumentation after a minimum of 5 yrs follow up



# Materials and Methods

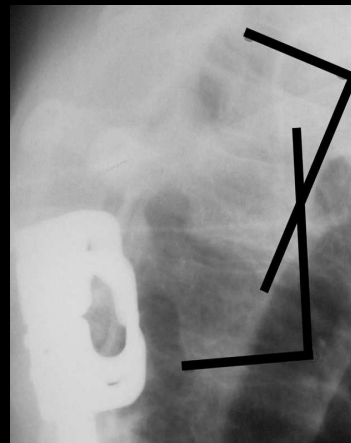
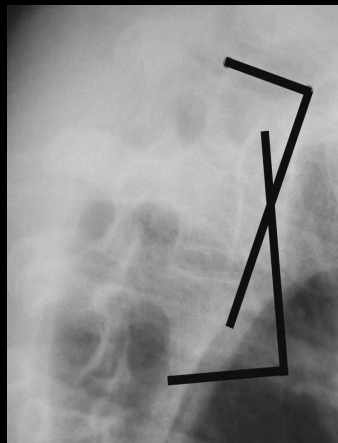
- 60 consecutive AIS patients (surgery between 09/1994 and 04/2002)
- av age at operation (yr)  
16,2 +-2,3
- av number of fused levels 10,3 +- 4,2
- minim follow up 5 years  
(mean 8,4 years)



# Materials and Methods

Posterior spondylodesis (ISOLA) in all cases

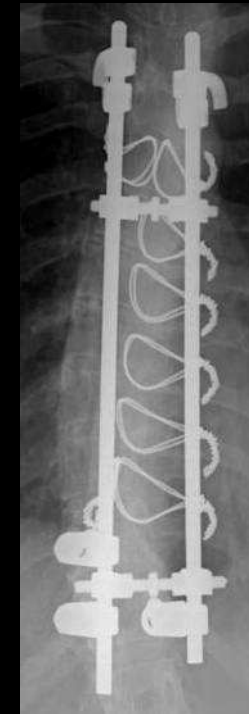
Hybrid technique (dist. screws, prox hooks, sublaminar wires)



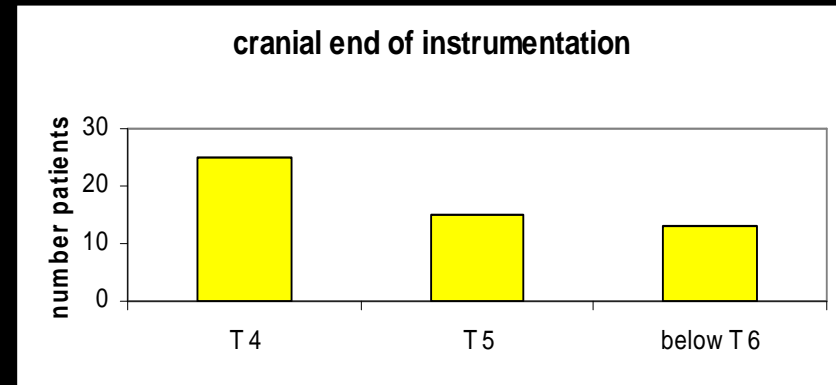
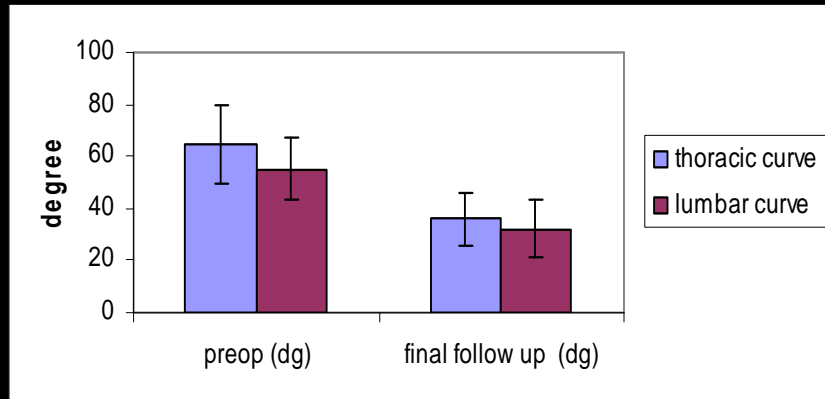
Method of  
measurement

PJK angle

(Glattes et al,  
Spine 2005)



# Results



# Results



5 pat -> abnormal pjk at latest follow up (av 18°, range 14-28°)



Greater preoperative PJK angle and T5-T12 > 40° kyphosis preoperative risk factors for PJK



# Conclusion

- We could not identify hybrid instrumentation as risk factor for developing PJK
- Proximal hook constructs seem to be less rigid than pedicle screws proximal and therefore might reduce the risk for PJK



**none of the authors has any  
potential conflict of interest**

