

Correction of L5 body wedging by bone remodeling during growing rod treatment

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Introduction

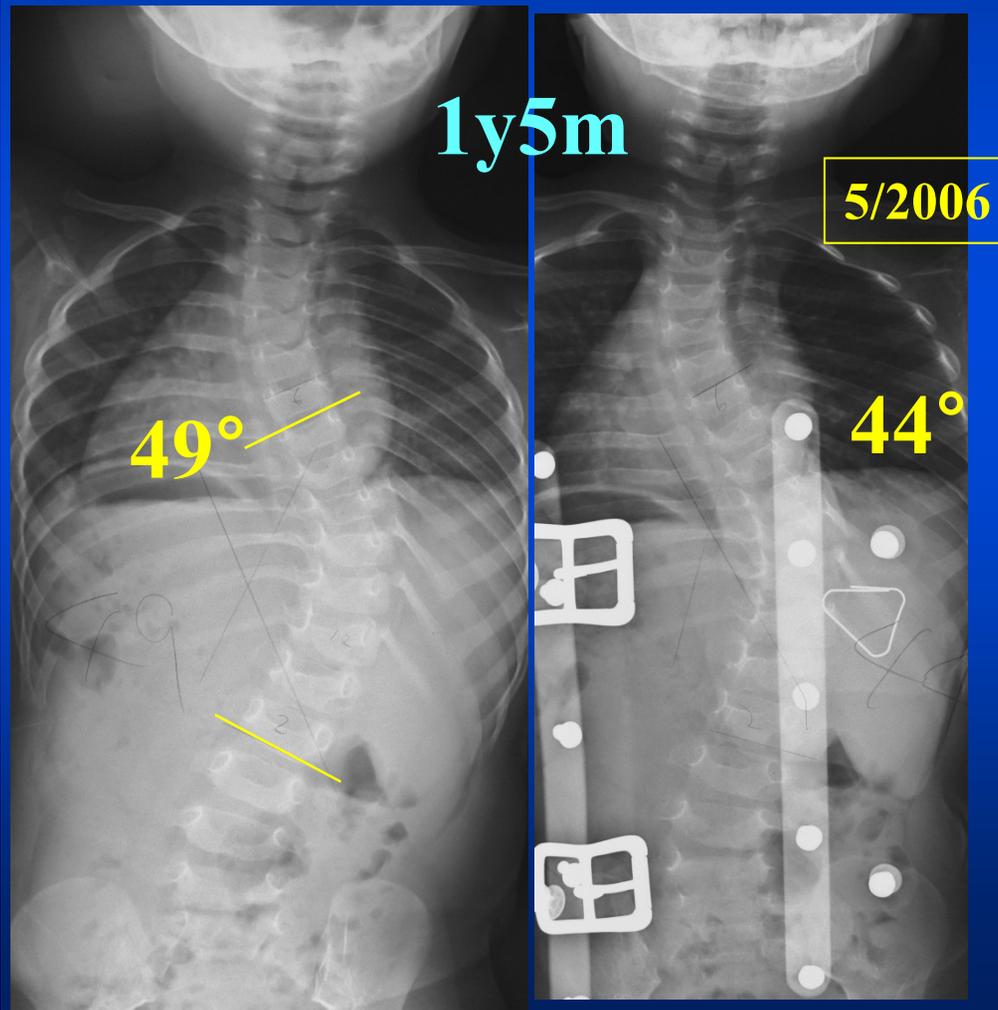
This is a case report of the correction of L5 Body wedging, which occurred during Growing Rod Treatment, using a Lumbosacral Distraction Rod.

Application of a Lumbosacral Distraction Rod without fusion resulted in successful treatment.

Case: Female, Idiopathic Scoliosis

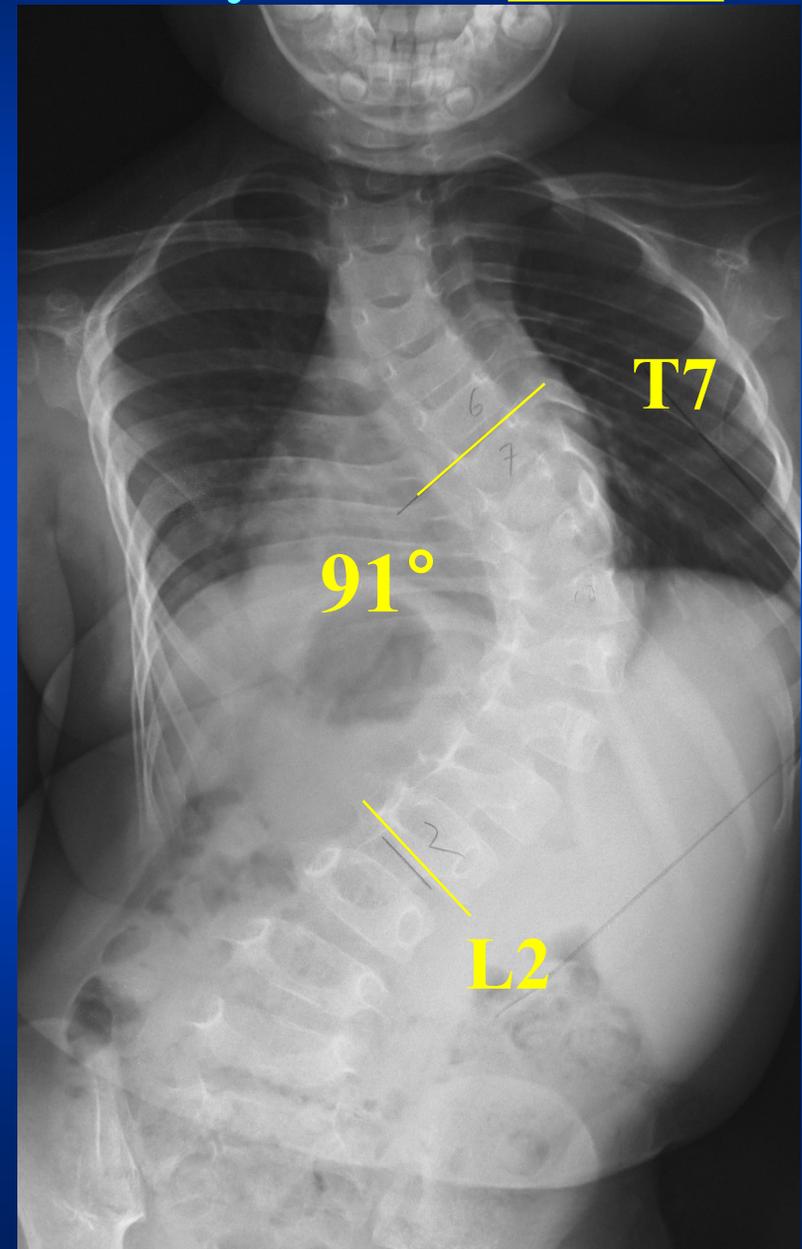
1y3m at First visit

Starting Brace Treatment



2y9m

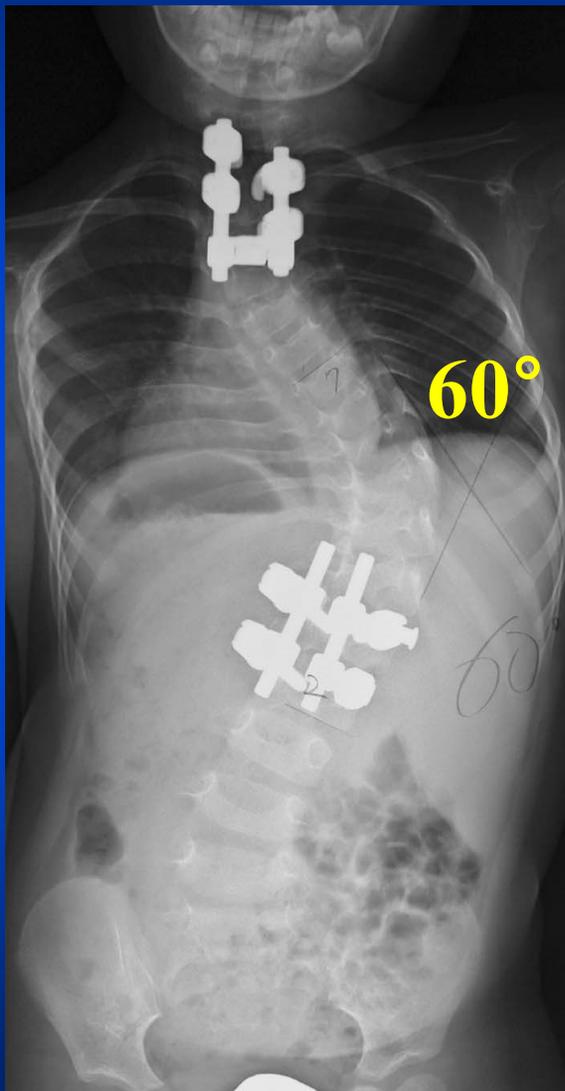
10/2007



2y9m

10/2007

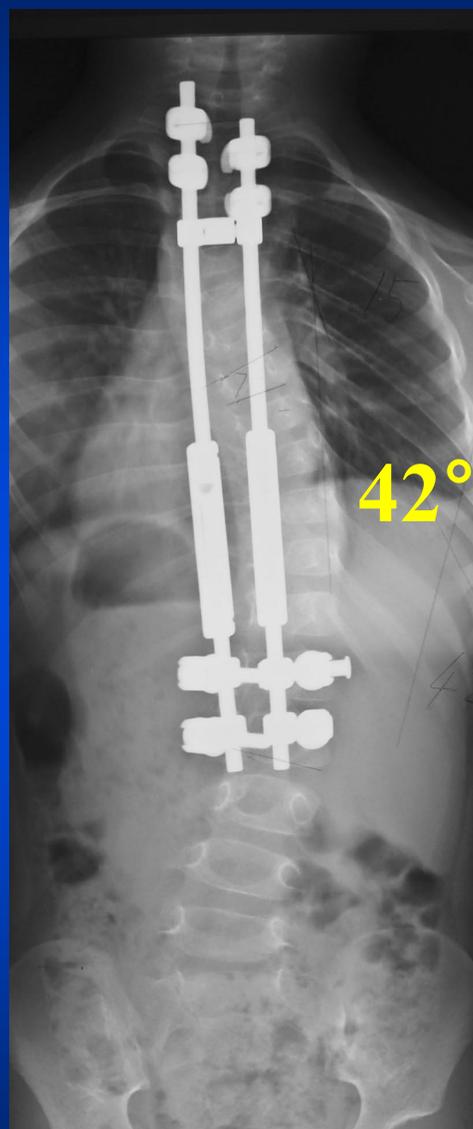
Starting Growing Rod Tx



Op. #1 : Foundation

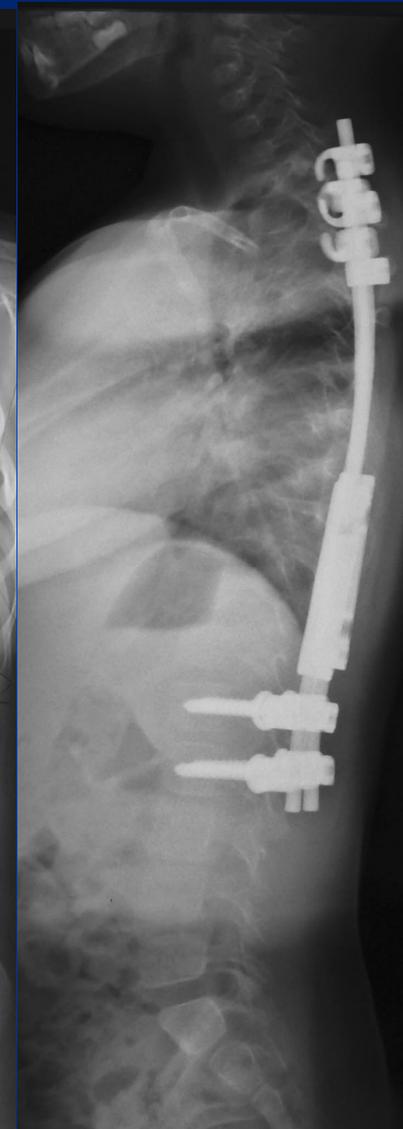
3y2m

2/2008



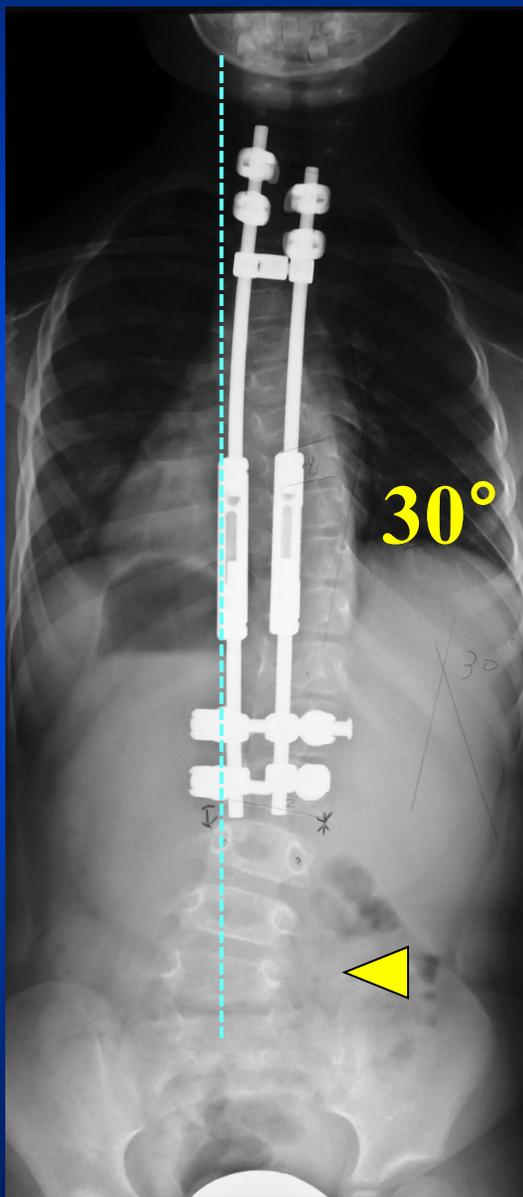
Op. #1 post 4m

Op. #2 : Growing Rod Insertion



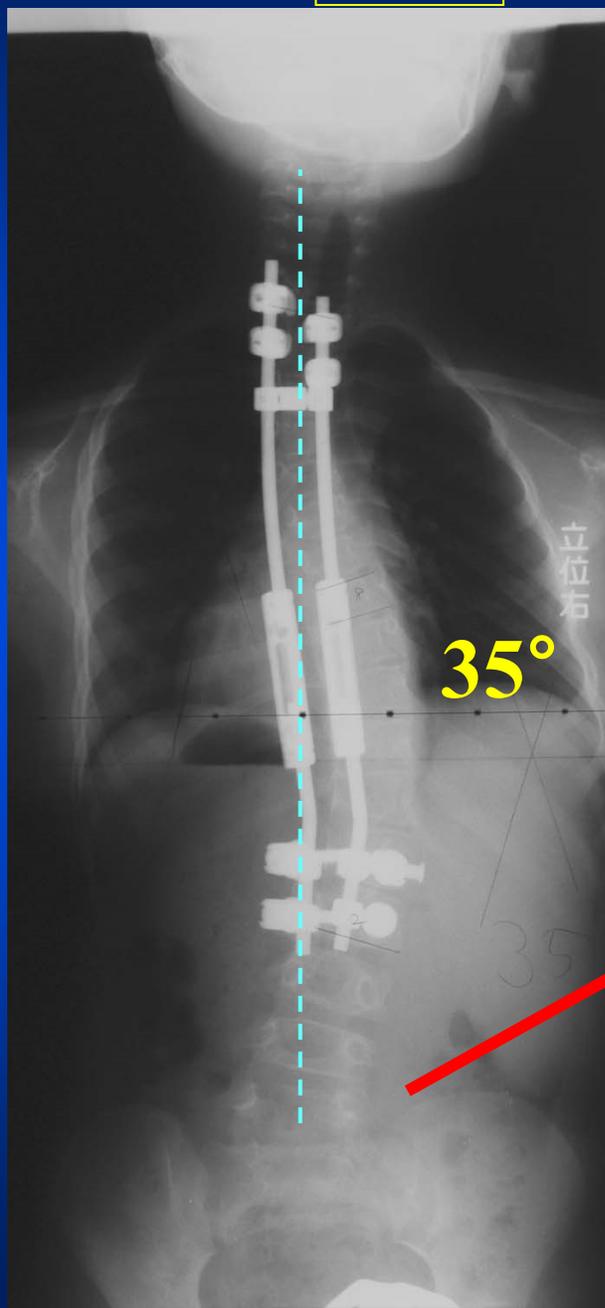
4y7m

7/2009

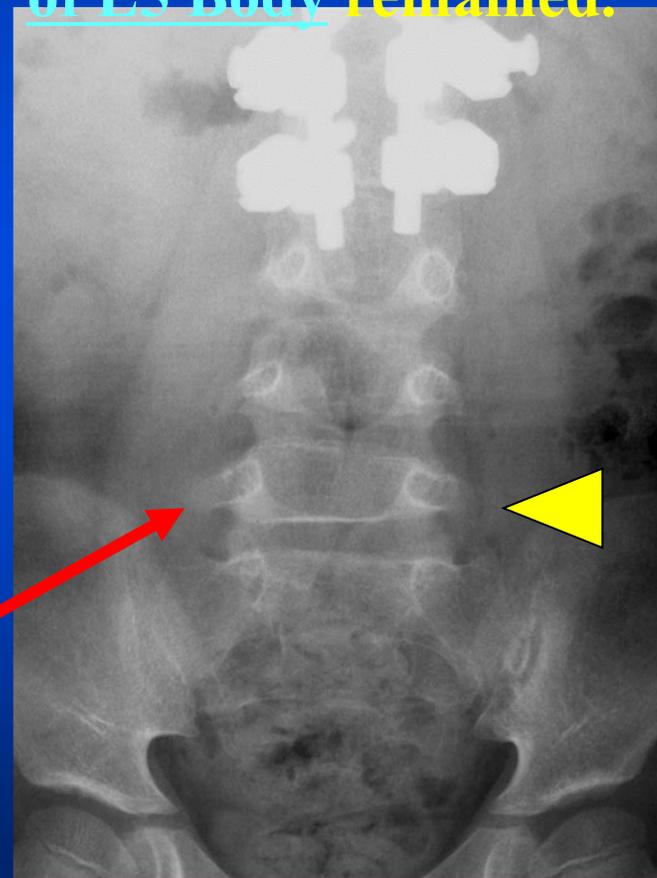


5y3m

4/2010

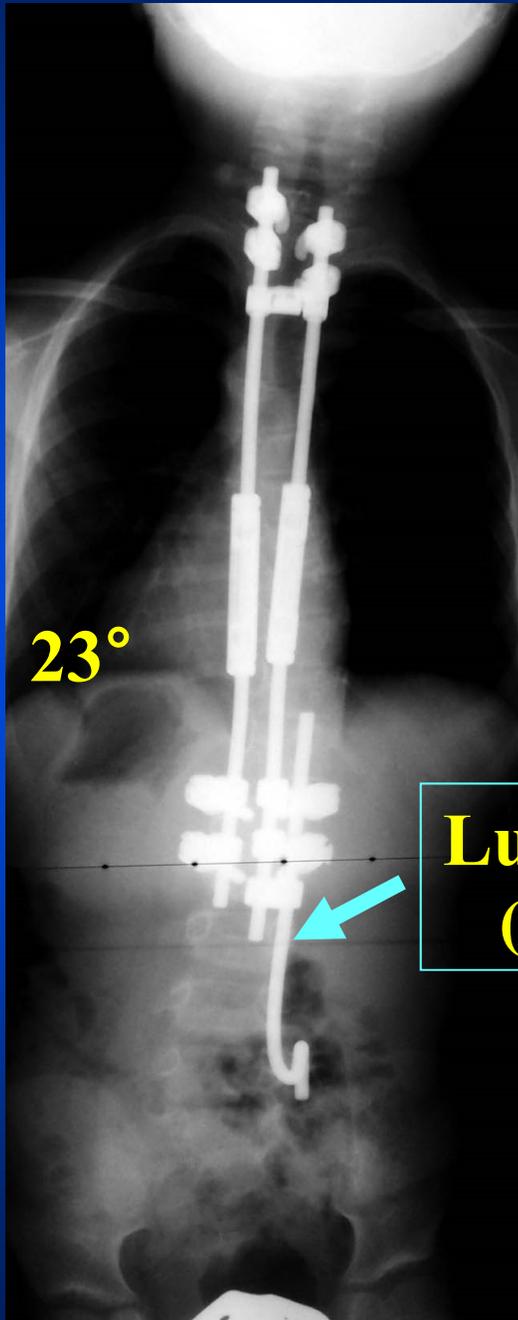


Coronal Off Balance was corrected by rod bending, but Wedge Deformity of L5 Body remained.



5y3m

4/2010



23°

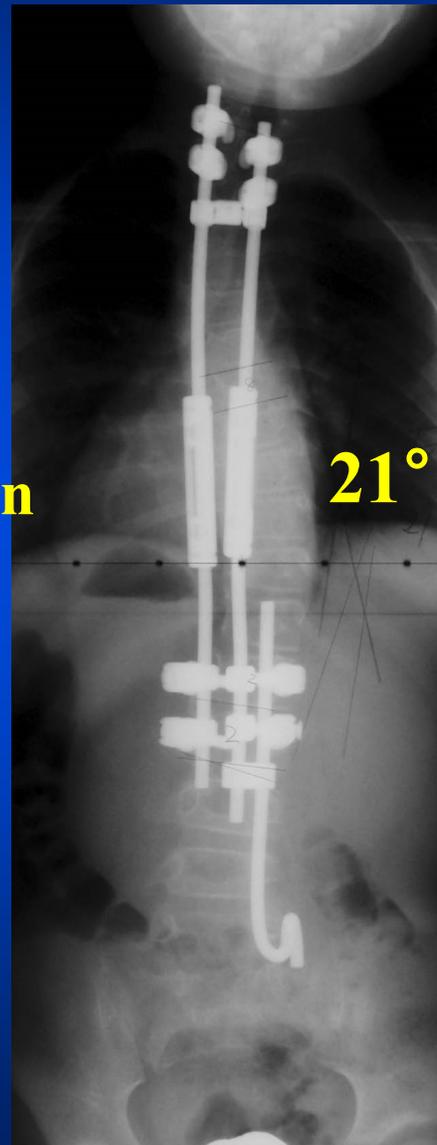
Op. #6

Distraction Force
was applied between
L2 and S1.

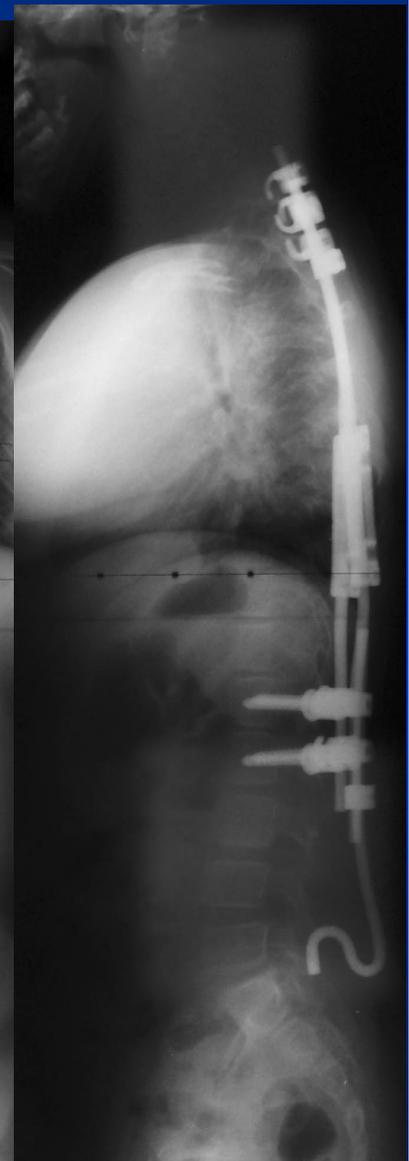
Lumbosacral Rod
(McCarthy type)

6y1m

1/2011

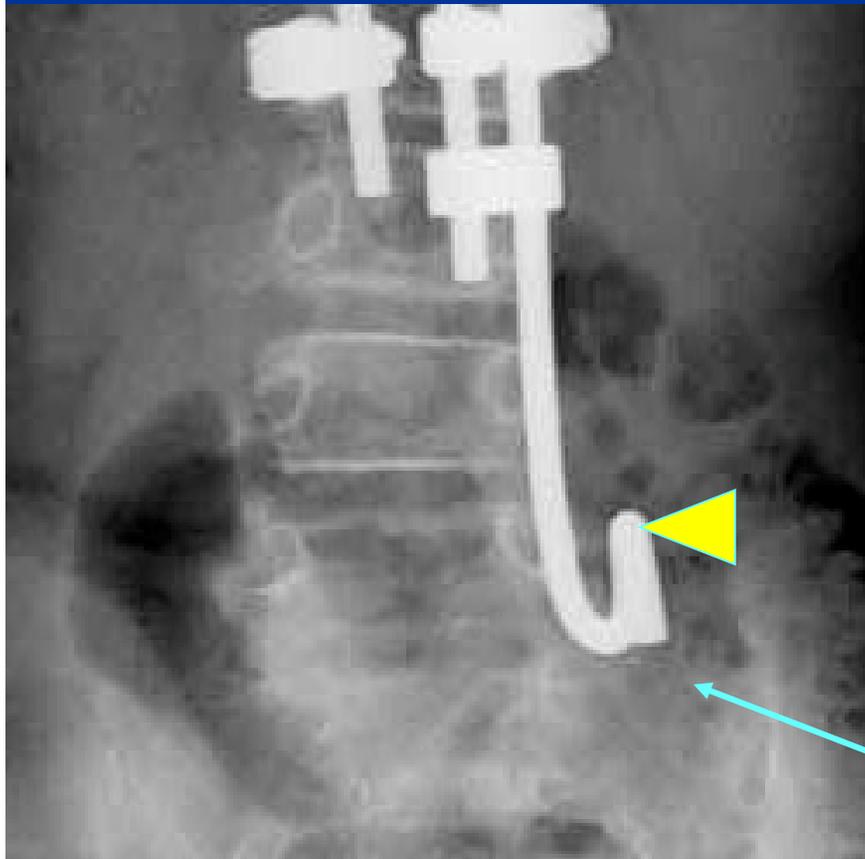


21°

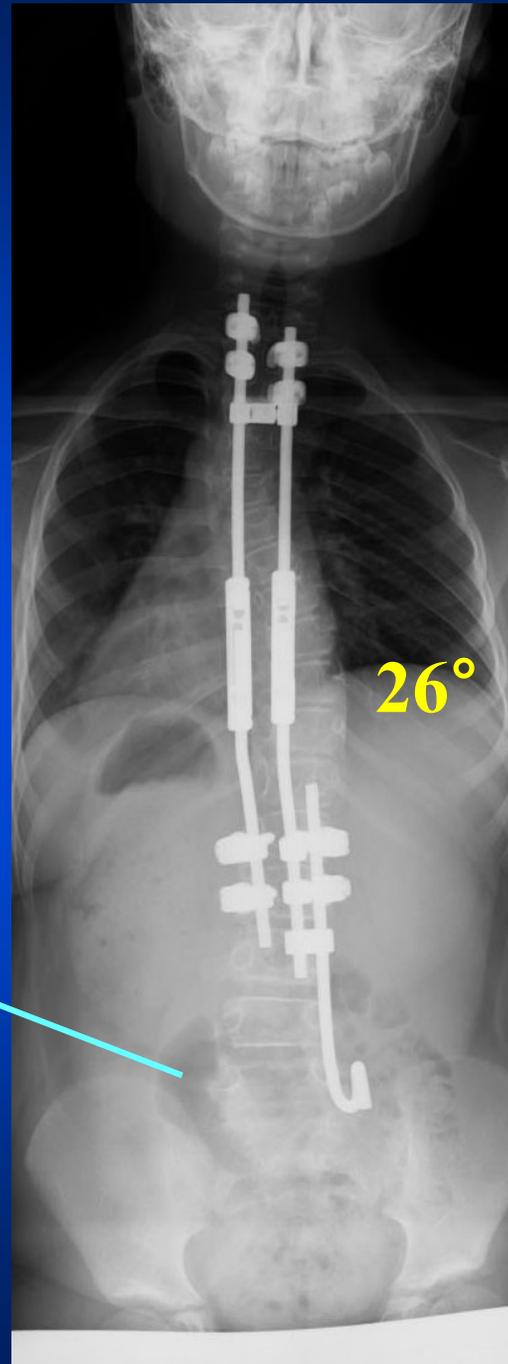


7y7m

7/2012



**Remodeling of L5 Body
had occurred.**

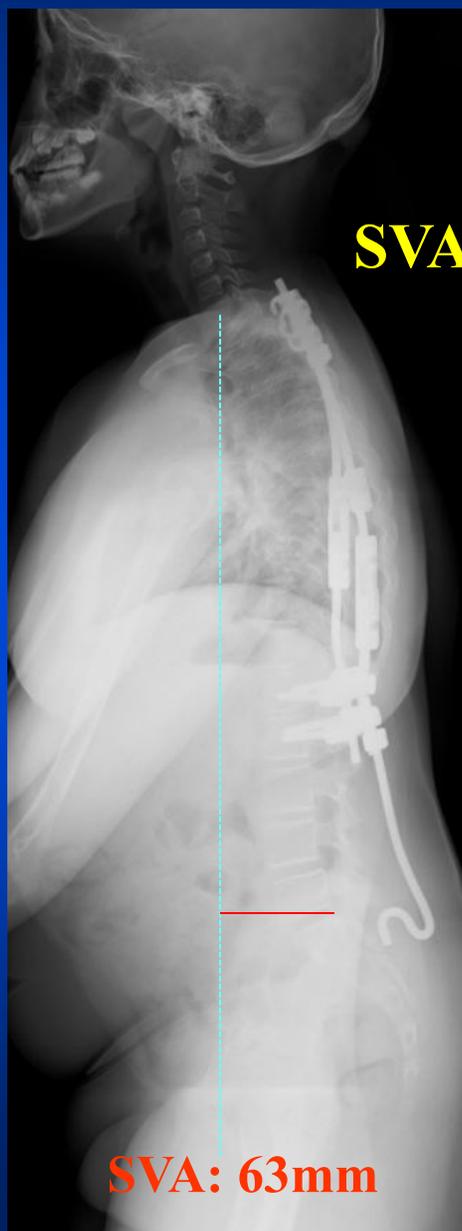


9y1m

1/2014

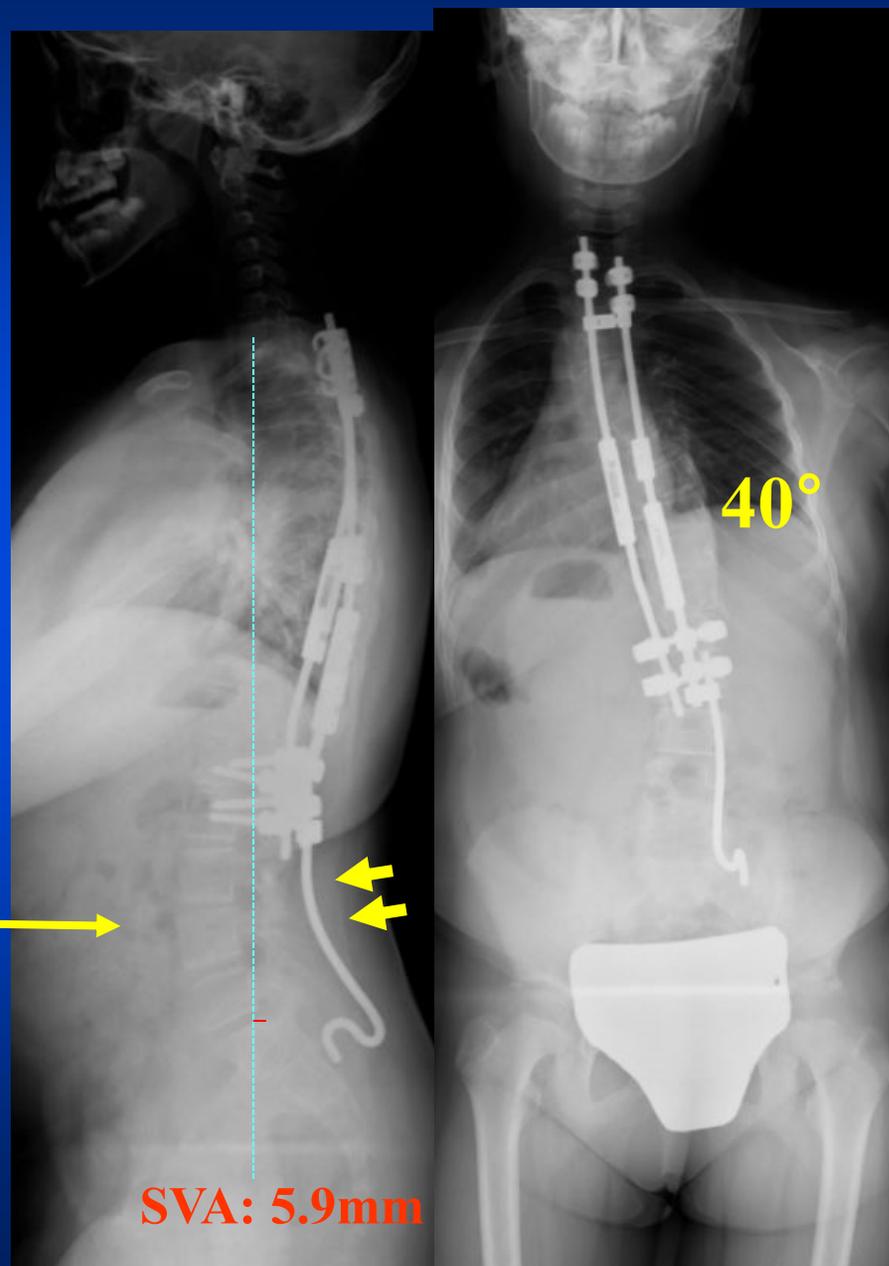
9y6m

6/2014



SVA moved forward.

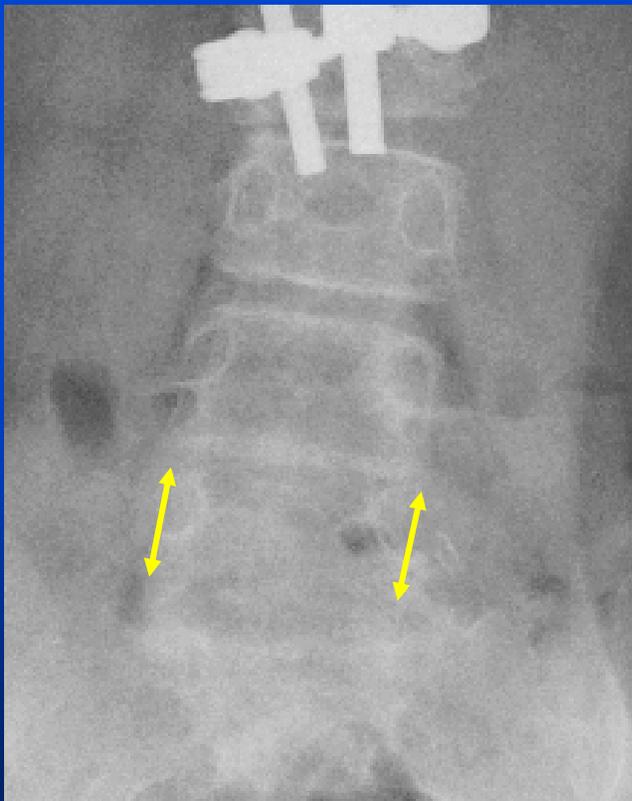
The lumbosacral rod was bent into a more lordotic contour



8/2014

Age: 9y8m

Op. #12:
Removal of Lumbosacral Rod.
Post-op 1m.



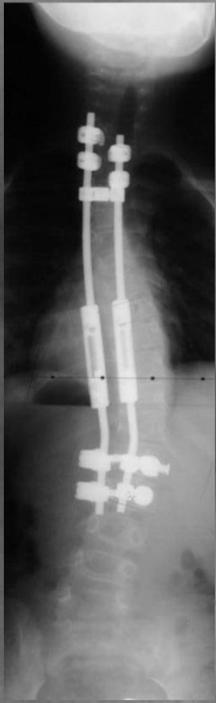
Discussion

Vertebral wedging deformity of the lumbar spine is the most resistive factor against correction of lumbar scoliosis, independent of whether it is a compensatory or a primary curve. It is, therefore, the authors' opinion that every effort must be taken to avoid such deformity.

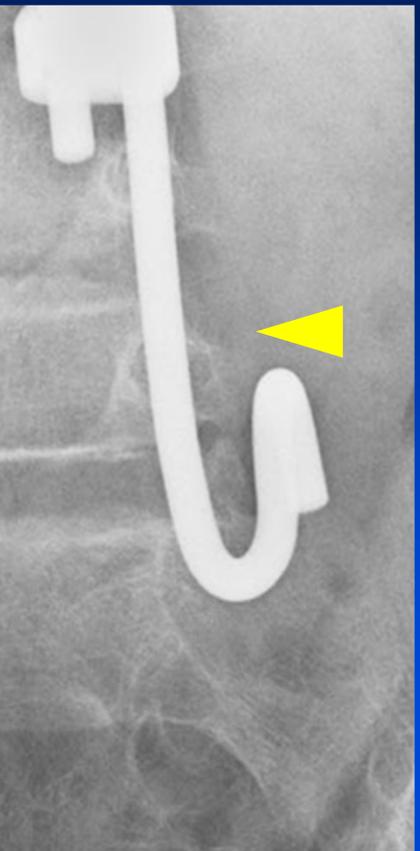
The case presented here still has a significant body list towards the left due to L2-L3 disc wedging after removal of the lumbosacral rod. We believe this can be managed by extending the instrumentation without fusion to L3.

Her VC and %VC are 1.94l and 99.5%, respectively, at this stage.

5y3m



7y9m



- **This case showed a possibility of normalizing vertebral body wedging treated by application of distraction force inducing bone remodeling.**
- **Intervention should be done while there remains large growth potential.**

Conclusion

- **We experienced wedged deformity of L5 body which had occurred during Growing Rod Treatment.**
- **By applying a distraction force to deformed vertebra, remodeling to normal shape occurred.**
- **We should give closer observation on lumbar body wedging to prevent or correct it in the treatment of growing children.**