

“Eiffel Tower” Construction In Gradual Correction Of
Children With Congenital Kyphosis In
Myelomeningocele -
Till 7 Years Follow Up.

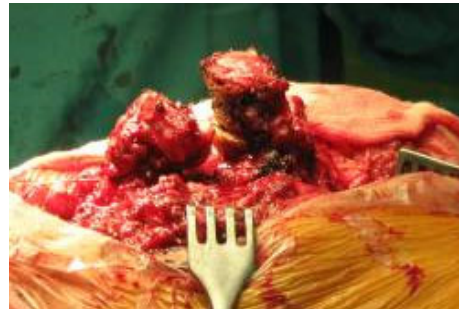
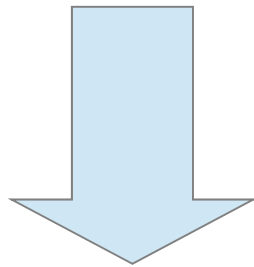
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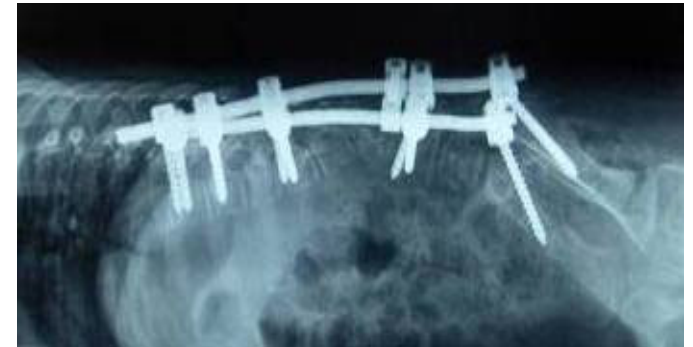
conflict of interest disclosure

There is no conflict of interest for any author.

myelomeningocele



**Increasing rigid hyperkyphosis;
decubitus;
Impossible supine position;
Huge final operation**



„Eiffel Tower” configuration

Double „rib – pelvis” construct

Distractions every 6-10 months

Aim:

protect from TIS

decrease spine deformation



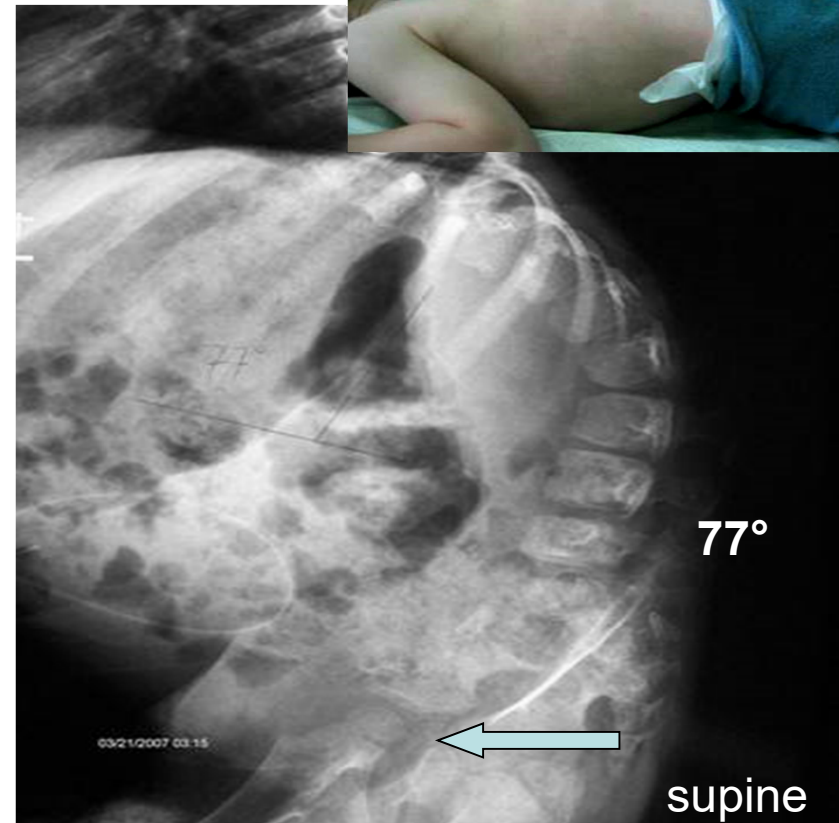
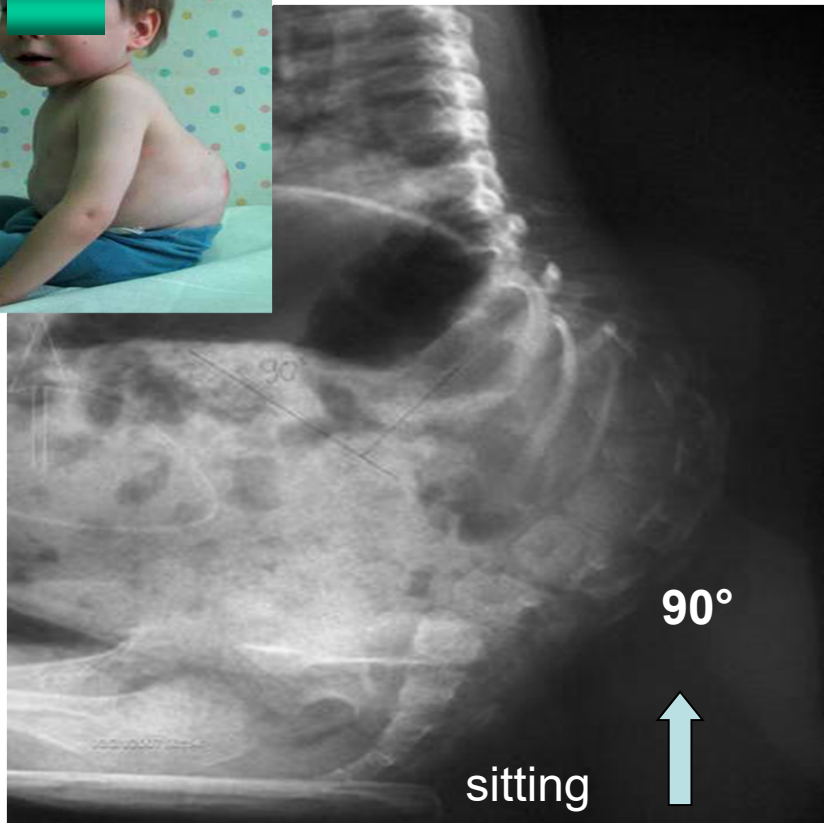
Material

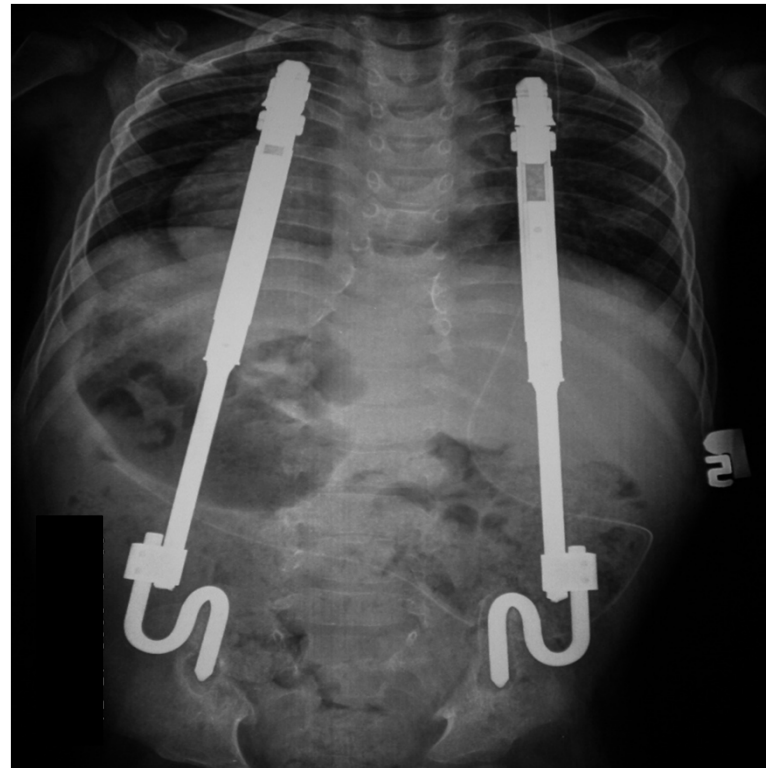
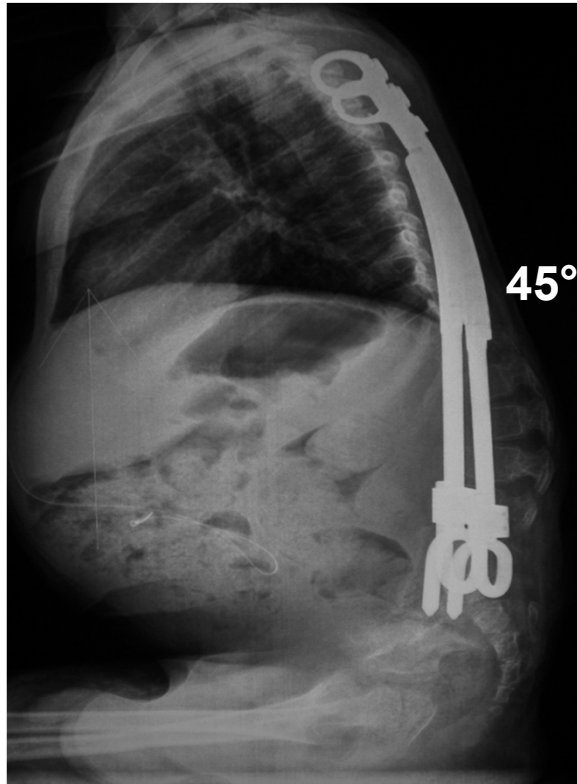
- 7 children - 2 males and 5 females
- Age: 5-9 y.o.
- Deformation before IP: 90-160° (mean 115 °)
- Primary correction: 40°-145° (mean 72°)
- Follow up: 1-7 y-s (mean 4 y-s)

five patients further correction after distractions

two patient initial correction was maintained

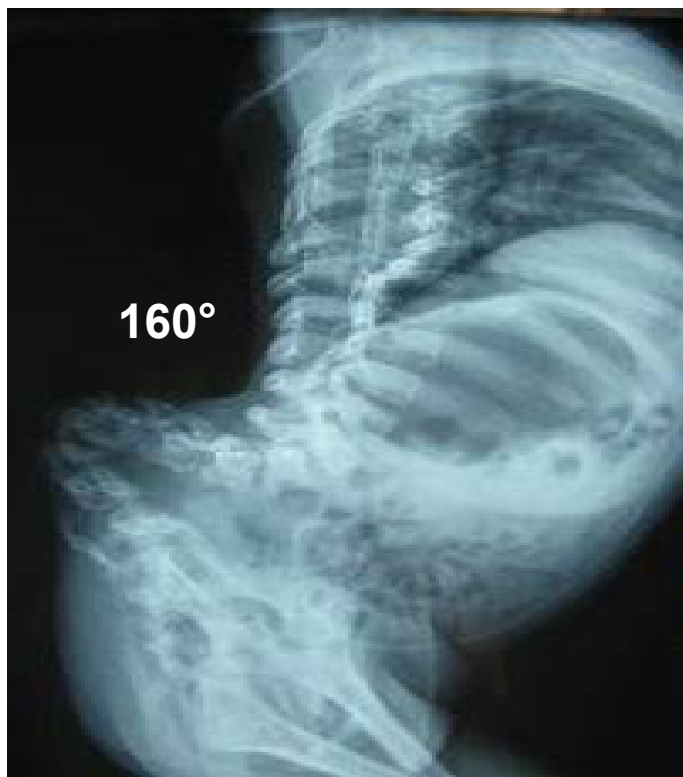
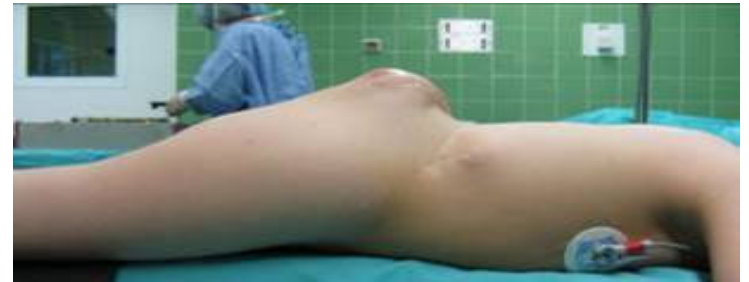
Case 1 boy 4 y.o.

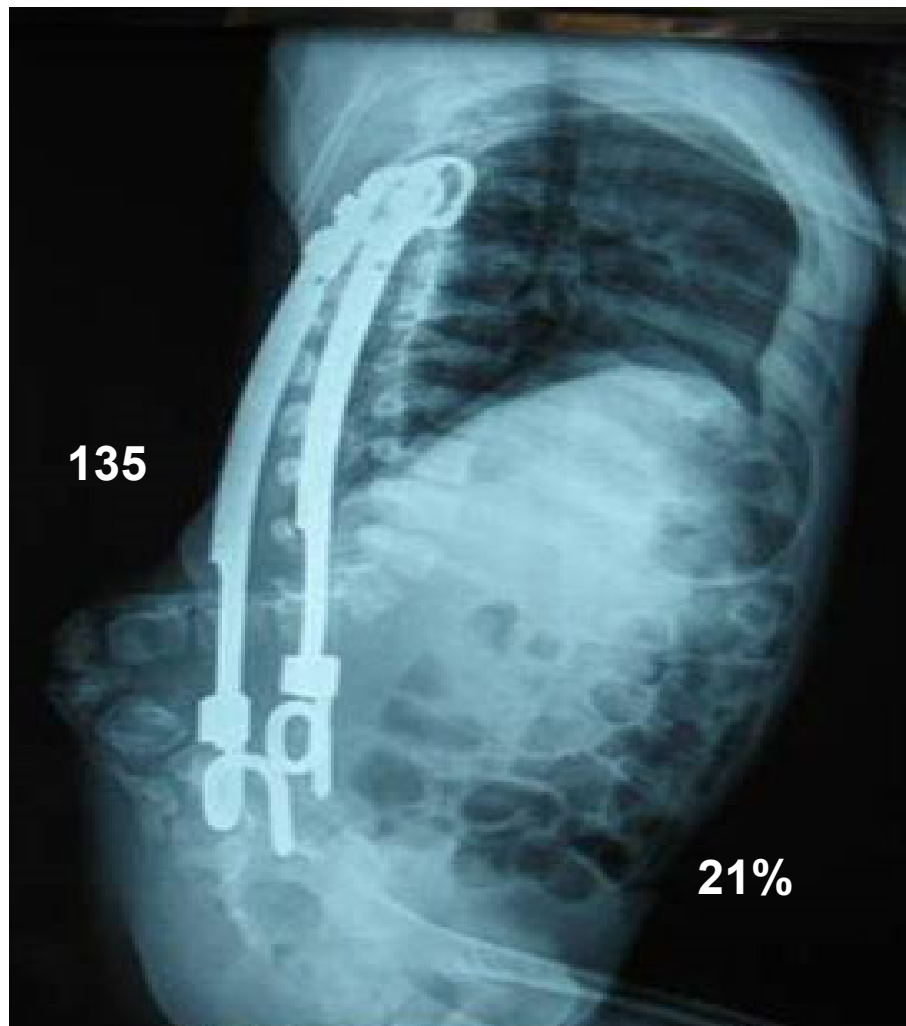




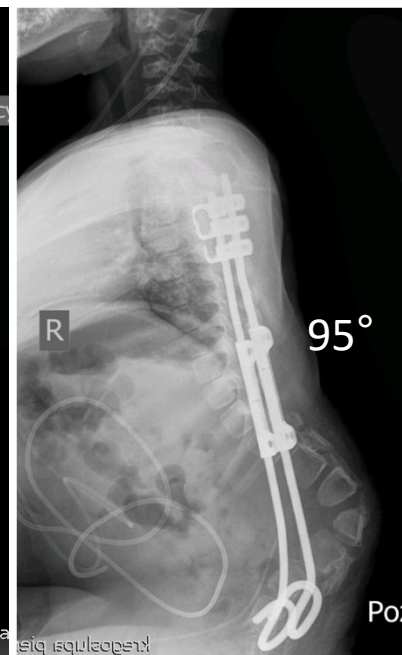
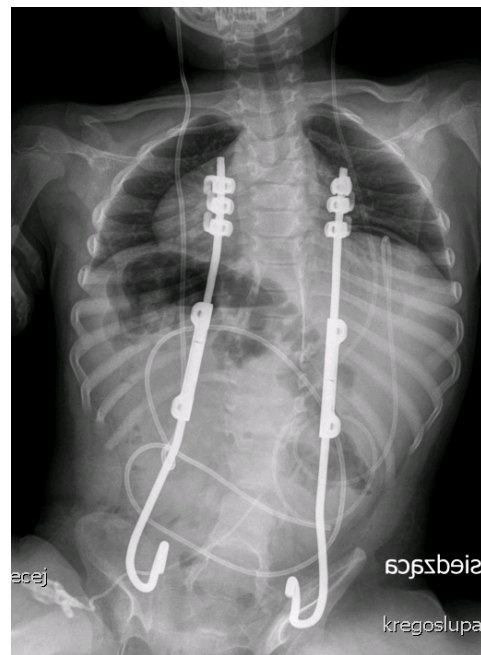
**F-up 6 years
No hump
Better function
No progresion**

Case 2 girl 8 y.o.





F-up 6 years
Still presence of hump
Better function
Reversion to primary deformation



Case 3
girl 4 y.o.

F-up 2 years
Smaller hump
Better function
No progresion

Discussion

- Hardware protects from the progression of deformation during spine growth
- Although correction wasn't spectacular, it was associated with functional improvement
- The younger children/smaller/flexible deformation- the better correction
- After spine maturity SF is necessary- some patients probably can avoid kyphectomy

Conclusion

This treatment seems to be an alternative **only** for younger patients without severe structural changes in vertebral bodies and with flexible deformation to stop further progression.