MCGR – Masters Techniques

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Surgical technique

prox. foundation:
monosegmental highthoracic fusion + bands around the ribs

distal foundation:
monosegmental lumbar fusion

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Surgical technique

2 incisions
contouring
testing
subfascial positioning
cross linking

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Fixation techniques

- Pedicle screws
- Hooks
- Sublaminar clamps currently around the ribs
Increased kyphosis $> 50^\circ$

- Upper Instrumented Vertebra (UIV) go to T2 - T1
- Bending enough kyphosis into the rod
- In case of hypokyphosis may end at T3 or T4
Last Instrumented vertebra (LIV)

Choose stable vertebra

- Always choose stable vertebra with severe trunk shift

Choose LTV (Last touching vertebra) if disk below is stable
Actuator Positioning

• Best around TH10 and L2 (physiologically straight spine)
• Avoid positioning of actuator above T8 to allow for sufficient kyphosis
Offset Rod

- avoid crossing spine, if necessary we use an offset rod
Push prone technique

- Before fixation of the rod to the 2 foundations we push the apex of the curve to gain maximum correction.
Distraction – protocoll

- Outpatient procedure
- Use of Diméglio data
- X-rays pre and post lengthenings
- Ultrasonography for lengthening/distraction control
- Prone position across pillow
- If applicable additional longitudinally traction, ibuprofen

Distraction procedure
Ultrasound for distraction control

reduce of radiation

extended portion

Motor
Housing
extended portion
Thank you