

Self-Lengthening Devices When and Why Shilla

Richard E. McCarthy, M.D.

Professor

Dept. of Orthopaedics and Neurosurgery

Arkansas Children's Hospital

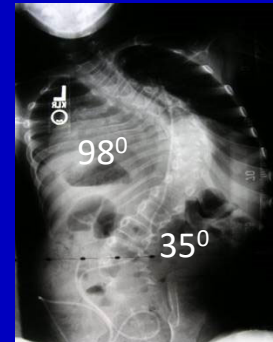
University of Arkansas for Medical Sciences

Little Rock, Arkansas, USA

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Indications

- Progressive deformity despite non-operative treatment
- Curves >50 degrees
- Adequate bone density for pedicle screw fixation
 - If questionable, perform bone density
- Adequate nutritional status for implant coverage and wound healing
 - ?placement of “button” preoperatively
 - Consult with nutritionist



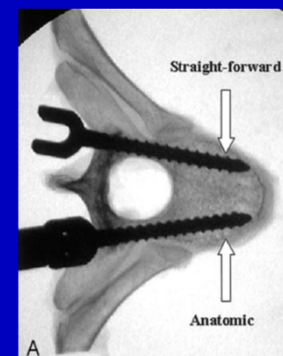
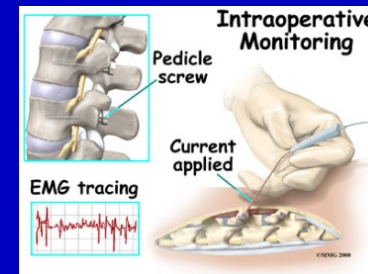
Indications - Basics

- Medical stability
 - Pulmonary consult
 - Cardiac consult
 - Anesthesia consult
- Skeletal immaturity
 - Bone age better indicator than chronological age
- Pedicles large enough to tolerate screws
 - Preop CT scan if in doubt



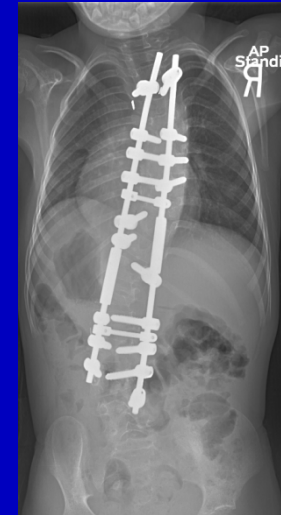
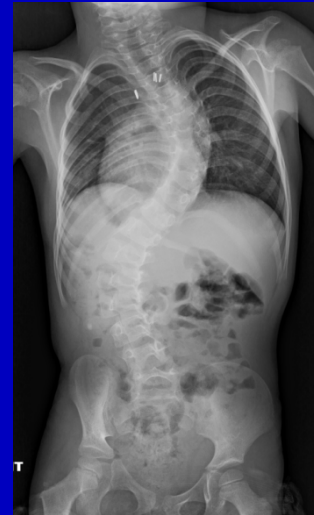
Indications - Safety

- Availability of spinal cord monitoring with skilled technician
- Availability of intensive care for post-operative monitoring
- Physician skilled with pedicle screw placement in small children

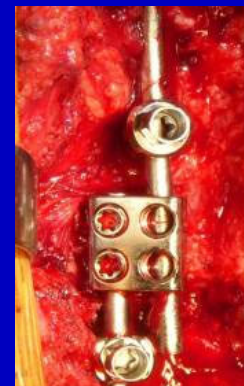
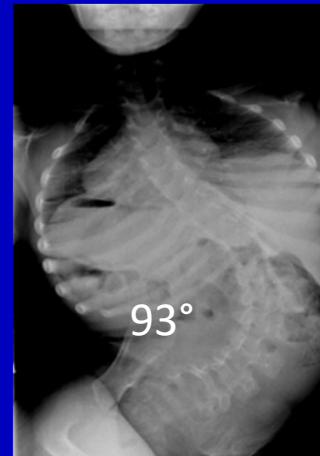


Advantages

- May be used with single or double curves

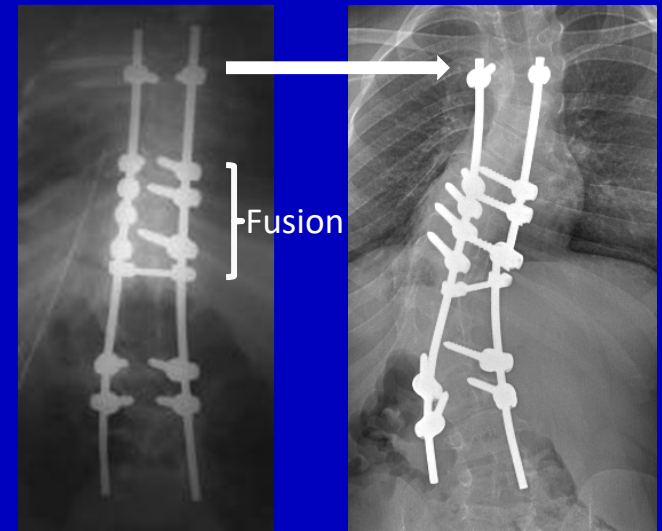


- May be used with fixation to the pelvis



Advantages

- Does not require scheduled returns to the operating room for lengthening
- Limited area of fusion at apex
- Avoids proximal junctional kyphosis
- CE mark approved



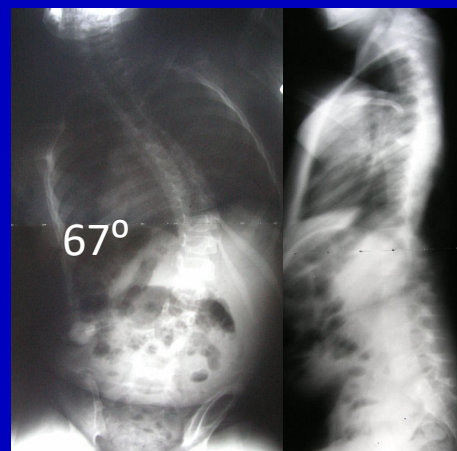
Immed
postop

7 yr postop

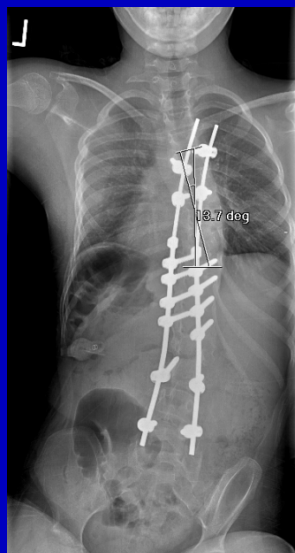




Preop



4+4 yrs old



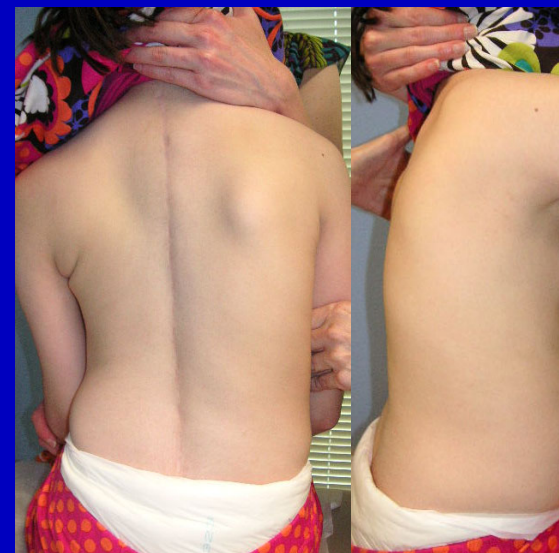
3+2 yrs postop



7+6 yrs old



Definitive Fusion



9 yrs old

Limitations

- Not FDA approved



- Child must be large enough for pedicle screw insertion (youngest 23 months)



Thank You