VEPTR CANNOT BE USED IN PATIENTS WITH KYPHOSIS

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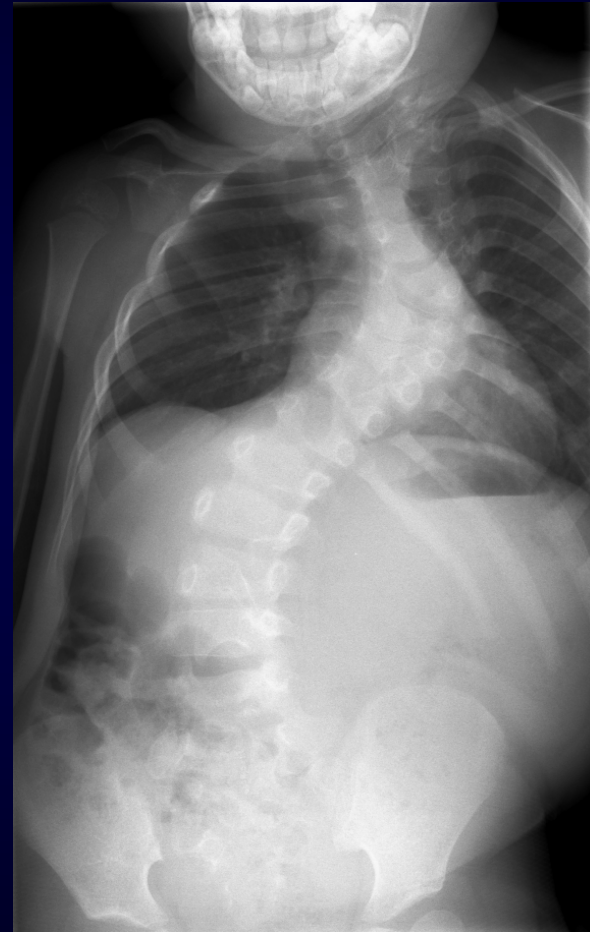The Royal National Orthopaedic Hospital
London, UK

VEPTR

Vertical Expandable Titanium Prosthetic Rib

VEPTR – The Facts

Used to treat and prevent Thoracic Insufficiency Syndrome due to Rib Cage Deformity

It is a RIB (Rib Cage, Chest) Device not a Spine (Vertebral Column) Device.

VEPTR – The Facts

It only spans the dorsal spine having even having a weak attachment on the most distal Ribs (Ribs 11 and 12 are usually flimsy).

It cannot be extended through the chest to fix the cervical or lumbar spine.

Proximal failures and migrations has sometimes disastrous complications (Brachial Plexus Injuries
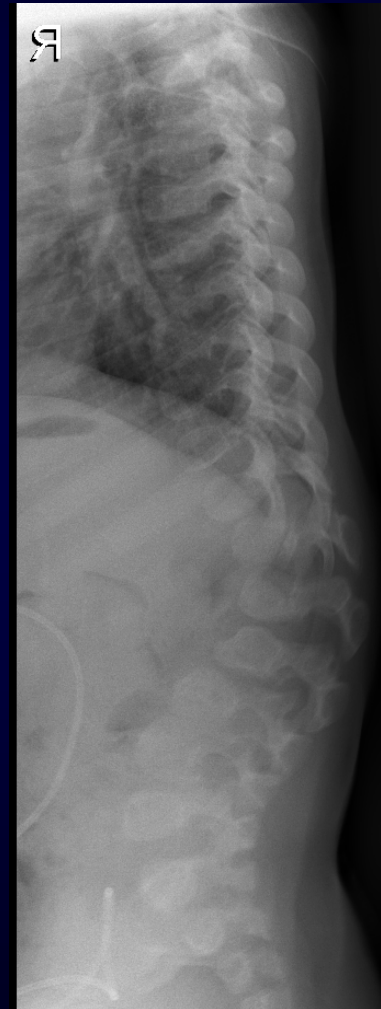
KYPHOSIS – The Facts

Kyphosis is mainly a Vertebral Column Deformity not a Rib Cage Problem.

Kyphosis can occur in the cervico-dorsal, dorso-lumbar and lumbar spine in areas anatomically having no ribs.

In Kyphosis there is an increase in the Anterior-Posterior Diameter of the Chest hence the Space Available for Lungs increases in AP (not decreased).

KYPHOSIS – The Facts

Attachment to the vertebrae (pedicle / anterior screws…) are more stable than the ribs to fix and correct the spine. Direct versus Indirect fixation and correction.

Pedicle / anterior screws engage the vertebral body itself instead of the VEPTR which attaches in an adjacent bone.
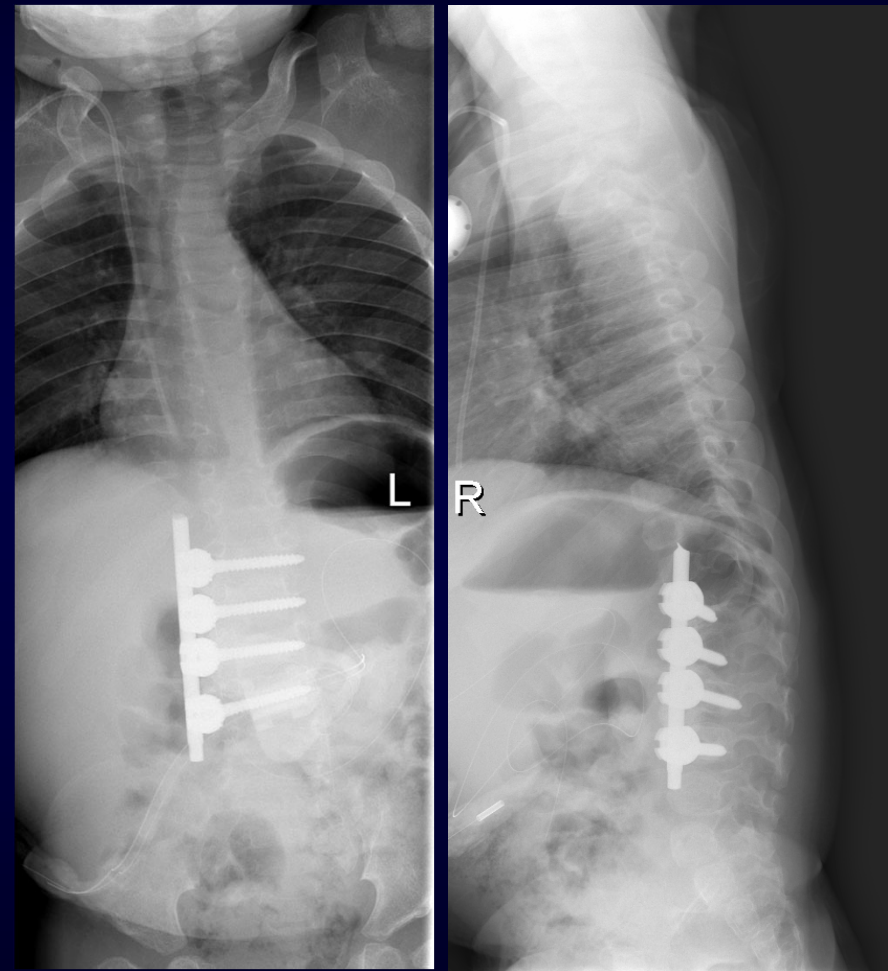
KYPHOSIS – The Facts

Proximal hooks in growing rods (claw or double claw) failures has no reported neurological complications.
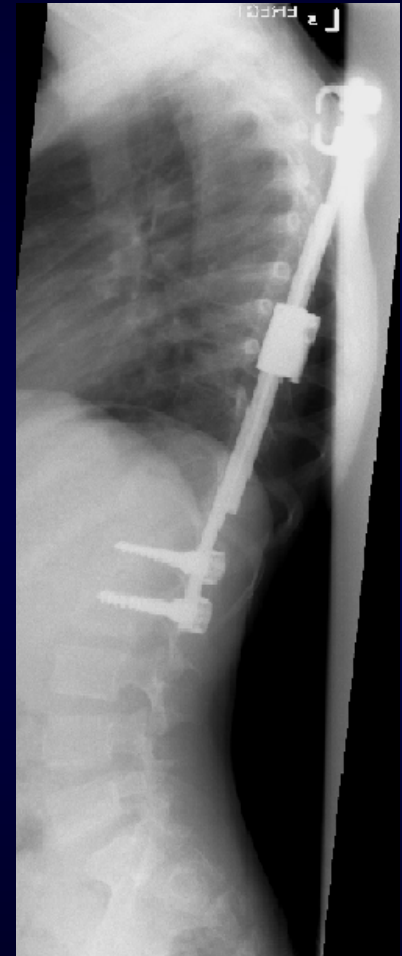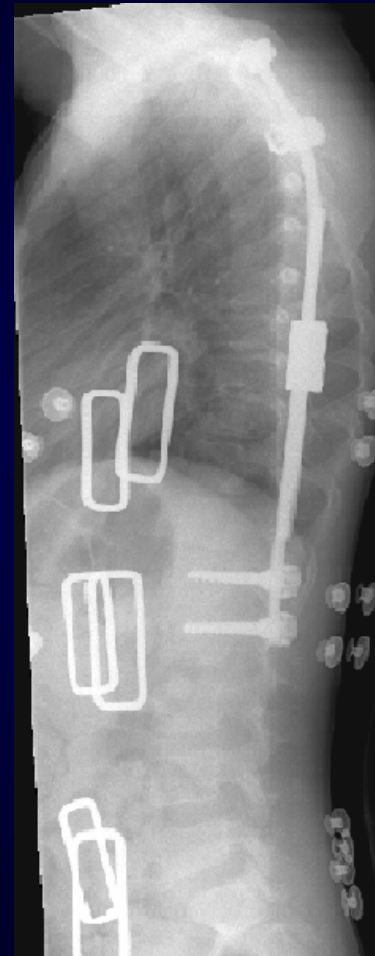
CONCLUSIONS

- Correction of kyphosis is demanding with all types of growing implants.

- Many of the failures of Growing Implants are due to proximal construct failures, migrations…. which are more common in kyphosis.

- Kyphosis needs to be flexible before correcting it with any growing implants.

- If needed growing rods can be tried in selected cases however No Place for VEPTR