

A New Alternative Designe for Vertical Expandable Prosthetic Titanium Rib

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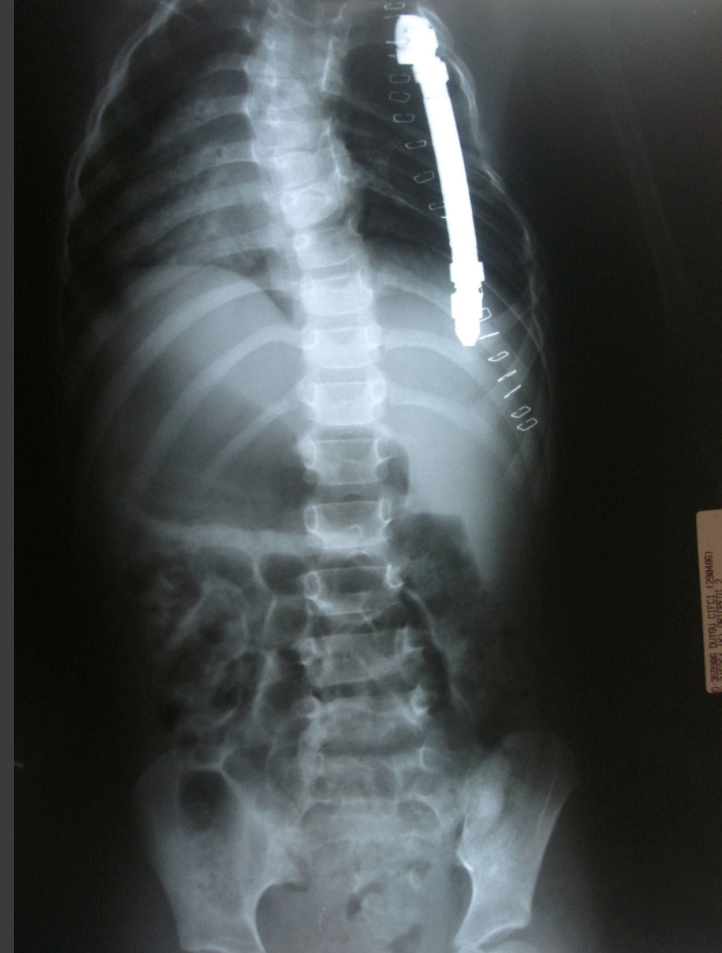
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Background

- The vertical expandable prosthetic titanium rib (VEPTR) has been used in children with thoracic insufficiency syndrome to support the chest and allow lung growth
- Device, uses distraction force to indirectly elongate the chest and spine

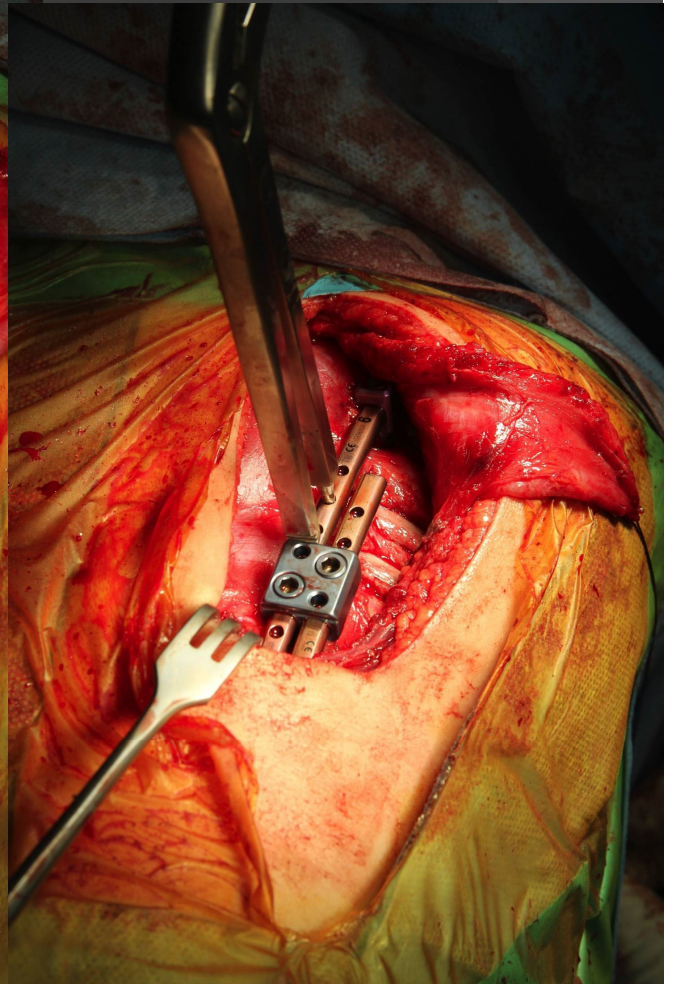
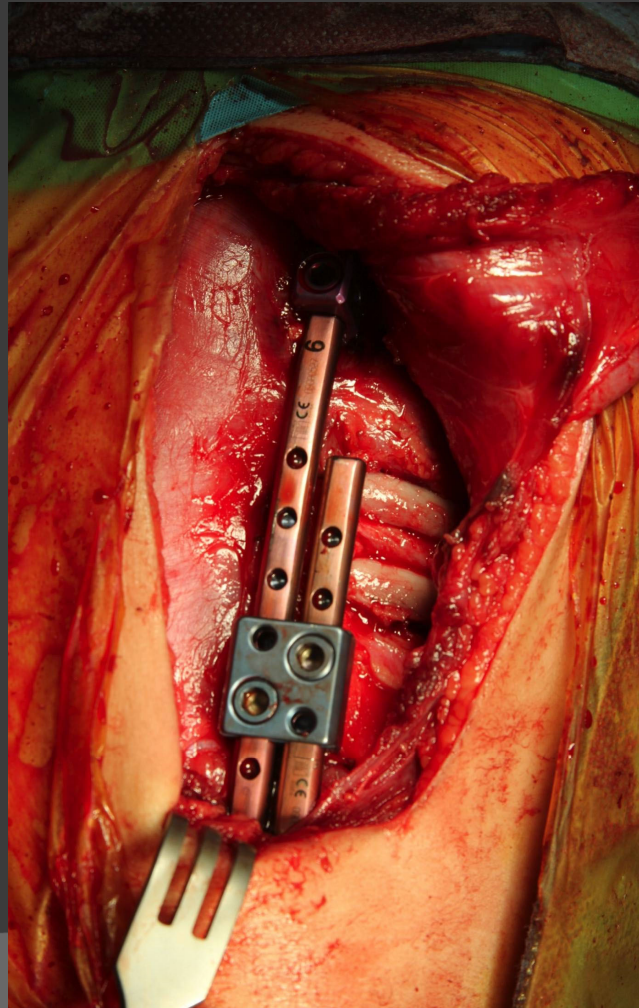
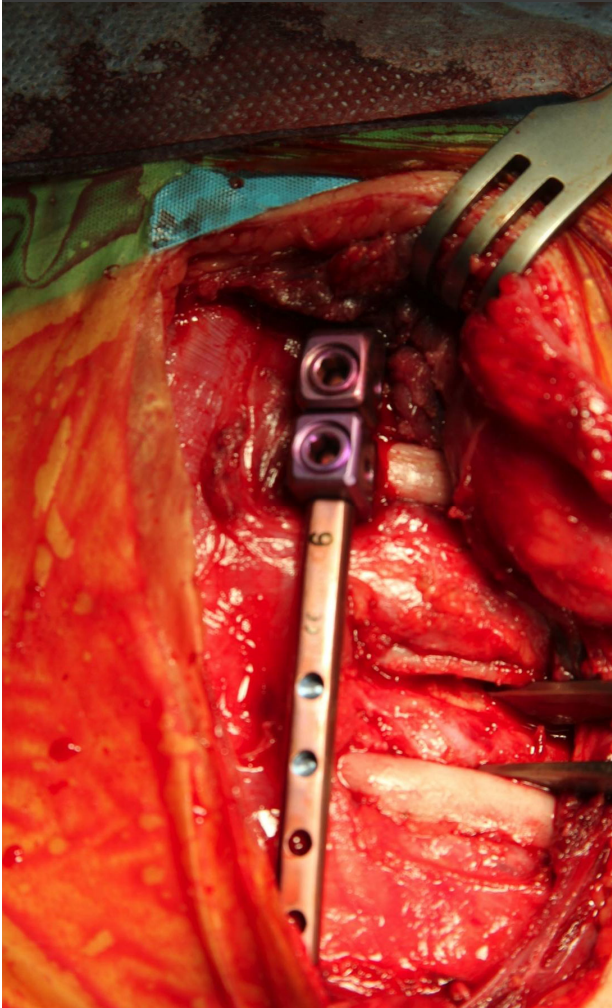
VEPTR



Costal Distraction Device (CDD)



CDD



Methods

- Between 2008 and 2010
- Group 1: 6 patients with original VEPTR
- Group 2: 5 patients Costal Distraction Device (CDD)

Results

- The average age at the time of initial procedure was;
- 5 years at group 1 (2-8 years)
- 4,6 years at group 2 (3-7 years)
- The average follow-up time was 20,6 months for group 1 (1-29 months)
- 18,2 months for group 2 (8-22)

Results

- ◎ The mean preoperative Cobb angle ;
 - 75° and improved to 55,6° in group 1
 - 64° and improved to 46,1° in group 2.
- ◎ The mean preoperative space available for lung (SAL);
 - %85 and improved to %93 in group 1
 - %93 to %98 in group 2 ($p > 0,05$)

Conclusions

- The analysis of the data shows that the natural history of the progressive spinal deformity was improved in two groups.
- This preliminary report affirms that, Costal Distraction Device as affective as the Original VEPTR and can be a safe and efficient alternative method for the treatment of early onset scoliosis.