

Does the Presence of a Gastrostomy Tube Improve Surgical Outcomes in Early Onset Scoliosis?

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Introduction

- Children with Early Onset Scoliosis (EOS) usually start off in poor states of health
- Vertical Expandable Prosthetic Titanium Rib (VEPTR) implants are associated with a high rate of complications



Hypothesis

- Prophylactic gastrostomy tube (G-tube) placement improves the general health of the patient and thus reduces the number of complications after VEPTR placement



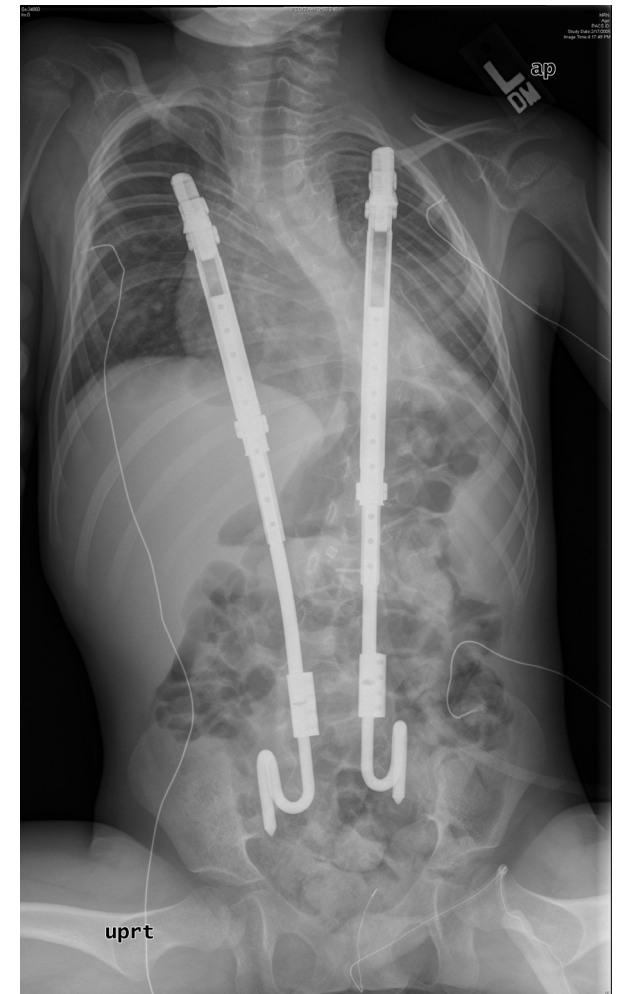


Methods

- Retrospective review of all EOS patients who received a VEPTR implant
- Demographic information: Age, diagnosis, severity of deformity, height, weight, and BMI
- Determined the presence and duration of G-tube
- Tabulated major and minor complications.
- Evaluated correlation between nutritional status, presence/absence of G-tube and complication rate

Results

- 75 patients with mean of 5.9 years of follow-up
- Average age at VEPTR implant 6.6 years (range 1.3-19.3 years)
- 30 received G-tube, 45 did not.



No Association

- Having and complication and G-tube presence
 - $\chi^2 = 0.843$, $p = 0.772$
- Number of complications and G-tube presence
 - T-test $p = 0.17$
- BMI change* and development of a complication
 - Spearman $r = 0.18$, $p = 0.122$
- Cobb angle change* and development of complication

*BMI change and Cobb angle change were calculated using the measurement at time of implant and our most recent measurement for each patient.

Associations

- Fewer complications with increasing age
 - Pearson Correlation $r=-0.234$
 $p=0.0435$
- Multivariate Logistic Regression Analysis:
 - Larger BMI change ($p=0.028$) and increased age ($p=0.024$) correlated with fewer complications





Conclusion

- We were unable to demonstrate a significant effect of G tube presence on complication presence or rate
- Patients who received G tubes may have started out more nutritionally depleted
- The study does suggest improved nutritional health (as shown by improved BMI) and increased age correlate with a reduced complication rate

Thank You!!



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