

# Anterior And Posterior Tracheopexy For Severe Tracheomalacia

## Objective

The modality of surgical treatment for tracheomalacia in young children has not yet been clearly delineated, and can be achieved through sternotomy, thoracotomy or less invasive techniques in larger children. With this report, we present our experience and results using a combination of anterior and posterior tracheopexy with subsequent aortopexy.

## Methods

During the last three years, young children were treated through a sternotomy approach. A posterior and anterior tracheopexy was performed. The latter using a ringed reinforced horseshoe shaped PTFE prosthesis. An aortopexy completes the intervention. Every step is performed under real-time bronchoscopic evaluation. An analysis of intra- and postoperative details is performed with mortality, freedom from reoperations and readmission as primary endpoints.

## Results

Eight patients underwent a surgical procedure for tracheomalacia. Their age ranged from two months to two years, with a median age of eight months (IQR 13.5). Median weight and length was 7 kg (IQR 6.2) and 65 cm (IQR 18) respectively. Clinical presentation was mainly recurrent chest infections (75%), brief resolved unexplained events (62.5%) and stridor (87.5%). The median procedure time was 180 minutes (IQR 104). No adverse events were seen during the surgery. The median mechanical ventilation time was 0.6 days (IQR 11.5). The last three patients were extubated in the operating theatre. Median intensive care and hospital stay was 3.5 (IQR 12.3) and 14.5 (IQR 25) days. All patients received antibiotics postoperatively. There was one death during the postoperative course, due to hemodynamic failure in complex congenital heart disease and unrelated to the tracheal procedure. The other patients showed a favorable clinical course without the need for readmission.

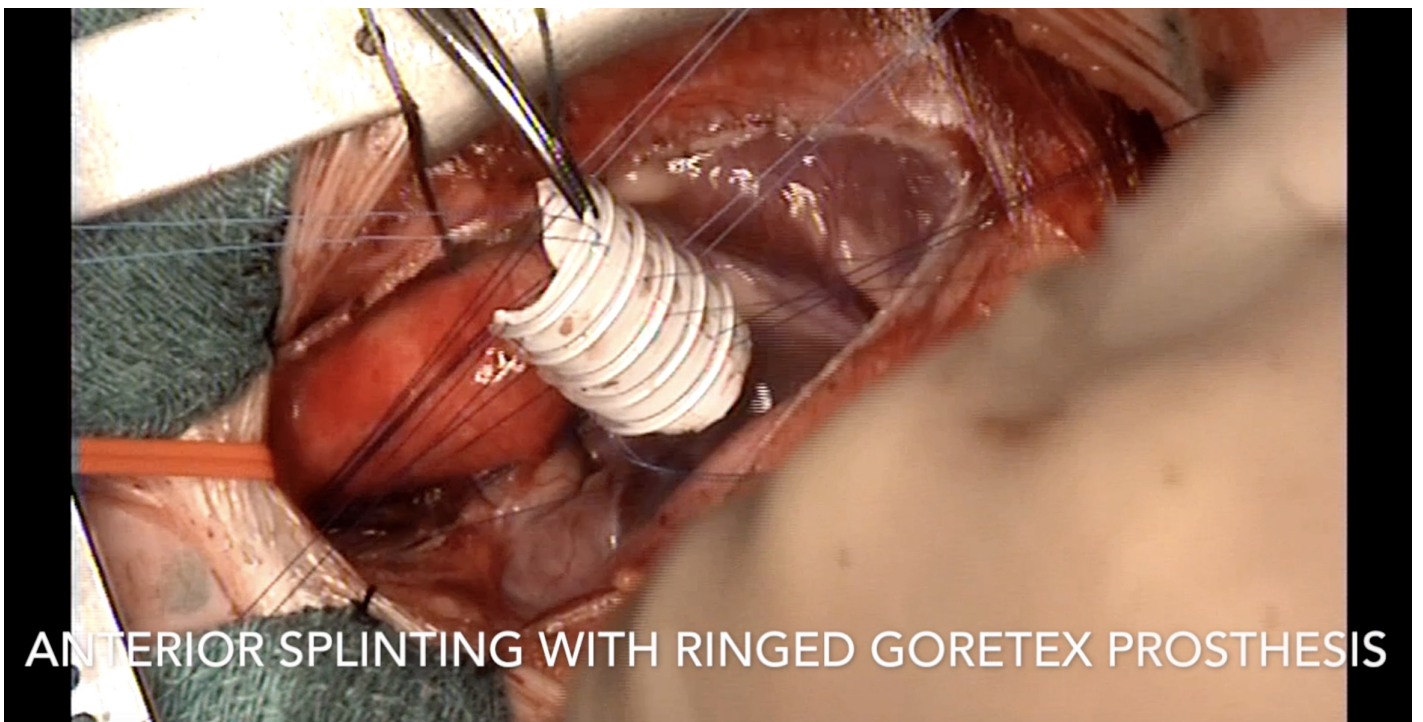
## Conclusions

Surgical treatment of severe tracheomalacia through the combination of anterior and posterior tracheopexy with additional aortopexy is safe and shows excellent clinical results. Intraoperative bronchoscopic control is warranted. Encouraged by increasing team experience, more patients were extubated immediately after the procedure. Weight lower than 8 kg is correlated to a longer hospital stay.

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Thomas Martens (1), Liesbeth Desender (2), Nagarajan Muthialu (3), (1) N/A, N/A, (2) Department of Thoracic Surgery, Ghent, NA, (3) N/A, London

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ANTERIOR SPLINTING WITH RINGED GORETEX PROSTHESIS