

CONGENITAL TRACHEAL STENOSIS (CTS): AN IMPORTANT CAUSE OF RESPIRATORY COMPROMISE IN THE NEONATAL PERIOD

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Background: CTS is a rare cause of respiratory compromise after birth. Overall incidence of this condition is unknown. Airway difficulties are apparent from birth or may develop later and can be challenging as presentation is unexpected and not necessarily considered early in the resuscitation. Prompt recognition can improve airway stabilization and provide adequate ventilation and oxygenation. Therapeutic options remain limited although survival can be 75-92%

Objective: To highlight the varied presentation and describe early medical management and evaluation

Case reports: 3 patients that presented to our institution in 1 year are described.

Patients' details (table)

| Patient | Gestation | Time from birth airway concerns first raised | ENT examination | Associated findings | CT scan | Outcome | Post mortem examination |
|---------|-----------|--|-----------------------------------|--|---------|-----------------------|-------------------------|
| 1 | 34 5/7 | 2.5 hours | MLB | Tetralogy of Fallots Double aortic arch | Yes | Died day 3 | Yes |
| 2 | 39 1/7 | 10 minutes | Anterior neck exploration and MLB | Down syndrome | No | Died at 1 hour of age | Yes |
| 3 | 34 3/7 | Day 5 | Anterior neck exploration | Anorectal Malformation, Bilateral renal dysplasia Tracheo-oesophageal fistula | YES | Died day 6 | No |

[Patient details]

All patients had other medical conditions. Common feature was the difficulty in intubation encountered by experienced practitioners especially advancing an appropriate sized ETT. In 2/3 patients we were able to secure an airway. Options included use of Heliox, adrenaline, active expiration. Multidisciplinary input is essential to allow thorough evaluation and considerations of therapeutic options. Findings from the imaging & ENT studies are presented

Conclusion: CTS should be considered in infants presenting with respiratory compromise when airway management is challenging. Prompt recognition allows directed resuscitation and interventions.



[Chest CT patient 3]