

LONG TERM RESPIRATORY MORBIDITY AFTER REPAIR OF CONGENITAL TRACHEAL STENOSIS

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With advances in surgical technique over the last two decades, the management of patients with congenital tracheal stenosis has improved dramatically. Knowledge about the long term outcome of these patients, however, is limited. This case series details the outcomes of patients who have undergone repair of congenital tracheal stenosis by end-to-end anastomosis at Sydney Children's Hospital (SCH).

Methods: The study involved review of hospital notes; interview concerning ongoing respiratory morbidity; physical examination; spirometry and plethysmography; and computed tomography (CT) scanning of the trachea.

Results: Seven patients have had this procedure performed at SCH. Two died in the post-operative period and one is too young to perform respiratory function tests.

Spirometry on the remaining four patients revealed reduced FEV₁ in all subjects (range 37% to 79% predicted). A restrictive deficit was noted in three subjects with small airway obstruction in the fourth. No subject demonstrated bronchodilator responsiveness. CT scanning showed residual tracheal stenosis in only one patient.

History revealed significant ongoing respiratory morbidity in three of the four subjects despite overall reports of good functional outcome. **Conclusions:**

Significant ongoing respiratory morbidity was noted despite subjective adequate functional outcome. Abnormalities detected were more consistent with parenchymal changes or chest wall deformity than upper airway obstruction.

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Key Words: Congenital tracheal stenosis; surgery; follow-up; lung function