

## A Single Centre, 10-Year Retrospective Review of One-Year Feeding Outcomes in Children with a Diagnosis of Hypoplastic Left Heart Syndrome

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### Abstract

**Background:** Hypoplastic left heart syndrome is a rare, severe congenital cardiac abnormality. A three-stage palliative surgical course provides the best chance of survival beyond the neonatal period. To evaluate SLT service delivery we conducted a retrospective review of feeding outcome and SLT provision.

**Method:** The project was registered as an audit. Children born between 2008 and 2018 were included. Primary outcome measure: pediatric adapted functional oral intake scale. Data was analyzed and summarized descriptively. Logistic regression determined the effect of weight, presence of necrotising enterocolitis, use of anti-reflux medication, non-cardiac co-morbidity and admission days on the need for tube feeding at 1 year of age.

**Results:** Prior to second stage surgery, 29/41 (71%) of children were tube fed. At 12 months of age 9/41 (22%) remained tube dependent. All three children who born before 35 weeks gestation remained tube dependent until 1 year old. One of three children diagnosed with post-operative vocal cord palsy remained tube dependent at one year old. Among all, 25/41 (61%) were referred to hospital SLT, and 16/41 (39%) were referred to community SLT. The regression model was statistically significant ( $p=0.011$ ) and correctly predicted 82.9% of cases. Weight was the only statistically significant variable with lower weight increasing the likelihood of requiring tube feeding.

**Conclusions:** In our cohort 22% of children remained tube dependent at one year of age. Speech and Language Therapy services should be designed to provide early supportive care optimizing transition to oral feeding. Infants born prematurely and those with poor growth should be prioritized for specialist outpatient care.

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