G290(P) RESPIRATORY COMPLICATIONS FOLLOWING TRACHEO-OESOPHAGEAL FISTULA (TOF) REPAIR

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The awareness of respiratory complications post TOF repair is variable. Due to abnormal airway epithelium and impaired muco-ciliary clearance, this group are vulnerable to lower respiratory tract infections (LRTIs) and recurrent wheezing which can lead to bronchiectasis if left untreated.

To evaluate respiratory complications in this vulnerable group of patients, a retrospective analysis of patients diagnosed with TOF between 2009 and 2019 was carried out in a tertiary centre. Patients up to the age of 16 years of age who remained under local paediatric follow-up were included in analysis.

A total of 36 patients were identified. 61% were male with a mean age of 7.2 years (range 1.9 to 15.3 years). The average age of respiratory referral was 2.79 years with cough the commonest reason (table 1). The referrals came from multiple sources as outlined in table 2. Tracheomalacia was diagnosed in 9/36 (25%), asthma in 6/36 (17%) and VIW in 2/36 (6%) patients. The average number of chest x-rays in the first month of life was 9.8. 7 patients had more than 10 performed. In this group, there was a higher incidence of paediatric respiratory problems with 4 admissions to PICU requiring non-invasive support for LRTIs or acute wheeze. Moreover, there were 10 hospital admissions with LRTIs in this group compared with 15 in the whole group. Only 1 child was extremely preterm (born less than 28 weeks' gestation) and 1 had a diagnosis of chronic lung disease, suggesting this group was at increased risk for TOF complications rather than prematurity.

Abstract G290(P) Table 1 Reason for respiratory referral

Reason for referral	Number of patients
Cough	10
Breathlessness	2
VIW	2
Other (abnormal chest x-ray, low sats)	2

Abstract G290(P) Table 2 Mode of referral

Referrer	Number of patients
Surgical	6
ENT	1
Primary care	1
ED/acute admissions	3
Other	3

It is important that health professionals who follow-up patients are aware of the respiratory complications of TOF and need for close monitoring and referral.

G291(P) OUTCOME OF PRETERM INFANTS DISCHARGED ON HOME OXYGEN- RETROSPECTIVE STUDY

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Aim We studied the short- and long-term outcome of babies in three-way comparison between babies (<32 weeks) discharged from two level three units with different home oxygen saturation policy and babies discharged without home oxygen (<32 weeks).

Methods *Units' practice:* 'Oximetry pass' is defined as Infants having oxygen saturation levels >94% at least 90% of the times in Unit1 and having oxygen saturation >90% for at least 95% of the time in Unit2. We defined 'developmental issue' as infants with score of <70 in any of the domains or infants with diagnosis of Cerebral palsy or global developmental delay. Audit approval was obtained from the local hospital.

Results We had a total of 59 babies from each unit who were discharged on home oxygen and 104 babies discharged without home oxygen, from 2012 to 2017. There is no difference between the two units in any respiratory outcome. Number of readmissions due to respiratory illness and duration of hospital stay during readmission is not different between three groups.

In the post-Hoc analysis, there is no difference in any of the respiratory, clinical outcomes and Bayley scores in babies discharged on home oxygen from both the units. Babies from Unit-2 continued to be on home oxygen for a longer period than babies discharged from Unit-1 (Mean diff: 11.9 ± S.E 3.7 weeks; p<0.001).

Following factors had significant correlation Home oxygen unit-1, Home oxygen unit-2, No home oxygen group, Birth weight, Gestation, Ventilation days and other variables. To test the hypothesis that Bayley score in all three domains and developmental issues is a function of above-mentioned variables, a stepwise multiple regression analysis was performed. Only ventilation days were significantly associated with BSID in all three domains (Adj R² of 0.25, p<0.001 in motor; 0.16, p<0.001 in cognition; 0.09, p<0.002 in speech) and ROP requiring treatment with any developmental issues (Adj R² of 0.14, p<0.001).

Conclusion Discharging babies on home oxygen and discharging on home higher oxygen saturation target did not offer any benefits in short- and long-term outcomes. Duration of ventilation and ROP requiring treatment is negatively associated with BSID scores and developmental outcome.

G292(P) SURVEILLANCE OF SLEEP DISORDERED BREATHING FOR YOUNG CHILDREN WITH DOWN SYNDROME WITHIN A GEOGRAPHICALLY-DEFINED AREA

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Aims Our Children's Hospital Down syndrome service cares for all young children with Down syndrome within the County boundary. Children with Down syndrome are at risk of sleep