

00426 **Epidemiology of Paediatric Tracheostomy: An 11-year Single Center Experience**

Pang Yuxian, Aletheia Chia, Ng Zhi Min, Ang Hui Chi Annette, Cristelle Chow, Teoh Oon Hoe, Lee Jan Hau

KK Women's & Children's Hospital

Aims: We aim to describe the epidemiology of paediatric tracheostomy over the past decade in our center.

Methodology: We conducted a retrospective study on patients ≤ 16 years old who had tracheostomies from 2006-2016. We collected data on patient's demographics, comorbidities, indication for tracheostomy and pre-tracheostomy ventilator requirements. Outcome measures include early and late post-operative complications, mortality, and success of and time to decannulation. Patients were followed up till January 2018 or death, whichever was earlier.

Result: There were 106 patients. Median age was 7.5 months [Interquartile range (IQR) 2.0-46.0]. 65(61.3%) patients had tracheostomies performed within the 1st year of life. 81(76.4%) patients had comorbidities, the most common being prematurity (27.4%, n=29). The most common indications for tracheostomy were anatomic airway obstruction (43.4%, n=46), neurological (30.2%, n=32) and respiratory indications (26.4%, n=8).

Early (≤ 7 days post-operatively) and late (>7 days post-operatively) complication rates were 5.7% (n=6) and 49.1% (n=52), respectively. The most common early and late complications were pneumothorax (2.8%, n=3) and suprastomal granulation requiring intervention (21.7%, n=23), respectively. Median cannulation time was 408 days (IQR 170-1153). In-hospital mortality rate was at 13.2%(14/106) but no death was directly related to tracheostomy.

Late post-operative complications were more common in patients ≤ 1 year old [37/65(56.9%) vs 15/21(71.4%), $p=0.048$]. Patients with late post-operative complications had a longer median time to decannulation compared to those without [1124 (IQR 368-1201) vs. 239 days (IQR 94-403); $p=0.001$].

Conclusion: Younger age at tracheostomy and longer cannulation period were associated with higher late post-operative complication rates.