Evaluation of Tracheostomy patients in Pediatric Cardiac Intensive Care Unit: Five years experience from single center

1- Department of Paediatric Cardiology, Istanbul Mehmet Akif Ersoy, Thoracic and Cardiovascular Surgery Center and Research Hospital, Istanbul, Turkey
2- Department of Paediatric Cardiovascular Surgery, Istanbul Mehmet Akif Ersoy, Thoracic and Cardiovascular Surgery Center and Research Hospital, Istanbul, Turkey

Objective
Recently, rapid extubation after pediatric cardiac surgery is a preferred approach but not possible in some cases and prolonged endotracheal intubation may lead to local trauma, nosocomial infections and psychological problems which will increase morbidity and mortality rates. Tracheostomy is an alternative method to prevent these problems. Still, there is no consensus for timing of tracheostomy, after pediatric cardiac surgery. In this study we aimed to evaluate, pediatric patients undergoing cardiac surgery, who required tracheostomy.

Patients and Methods
All pediatric cardiac patients (under 18 years of age) who had cardiac surgery and required tracheostomy between January 2010 and November 2014 were reviewed retrospectively. The time of tracheostomy, duration of mechanical ventilation and intensive care, clinical status, demographic, echocardiographic features and additional pathologies were recorded.

Results
After cardiac surgery, 19 (1.3%) of 1450 patients with a median age of 19.3±43.3(range 1.8-192) months during surgery and weight of 8.5±11(3.8 to 51) kg required tracheostomy. Ten patients (53%) were female. Median duration between surgery and tracheostomy was 38.2± 13.3(20-77) days. Mean extubation trial before tracheostomy was 4±1 times. Genetic syndromes was present in 5 (26%) of the patients (3 Down syndromes, one Di George syndrome, one Danon disease). Eight(42%) patients had neurological sequela. No procedure related complication was occurred in any patient except a patient with surgical site bleeding who needed surgical revision. After the tracheostomy, 12/19 patients (63%) were weaned from ventilators and 3/19 patients are still in the hospital. Totally 9/19 patients were discharged from the hospital and 5/9 were successfully decannulated (1, 4, 6, 8 and 11 months later). 8 patients died (7 during hospital stay, 1 at home) in total.

Conclusion
The mortality of tracheostomy patients is still significant but this may be related to primary cardiac disease and underlying other clinical problems. On the other hand tracheostomy which is fairly a safe procedure may facilitate discharge from the intensive care unit.