Chi-squared analysis was used for Continuous variables reported as mean standard deviation or median (interquartile range).

Baseline characteristics, primary diagnoses, intra-operative parameters, and congenital diagnoses were made by pediatric electrophysiologist, pediatric cardiologist, or cardiac critical care physicians with ECGs evaluated for confirmation during data collection.

Patients undergoing congenital cardiac surgery at Children's Hospital Los Angeles were included in analysis but were not available in every patient.

Arrhythmias are common after surgical procedures were compared. Identifying risk factors for the development of post-operative EAT may have biased towards treated (and therefore more clinically significant) EAT patients.

DISCUSSION

In this large cohort of infants undergoing congenital cardiac surgery, post-operative EAT was identified in 129/5243, an incidence of 2.5%.

Patients who developed EAT were younger and weighed less at time of surgery.

Increased STAT (the Society of Thoracic Surgeons-European Association for Cardio-Thoracic Surgery) category, longer CPB times, and longer DHCA times were associated with developing EAT. STAT category, longer CPB times, and longer DHCA times remained significant in multivariate analysis.

A number of congenital cardiac surgeries were associated with development of EAT (table 2), but only TAPVC repair remained significant in multivariate analysis.

Patients who developed EAT were younger and weighed less at time of surgery.

Additional surgical procedures were included in analysis but were not significantly different between cohorts.

ASO: Atrial septal defect; TAPVC: Total anomalous pulmonary venous connection; TOF: Tetralogy of Fallot; VSD: Ventricular septal defect.

REFERENCES


CONCLUSIONS

DiGeorge syndrome, longer CPB times, higher STAT categories, and TAPVC repair were all independent risk factors for development of post-operative EAT with TAPVC repair the strongest independent risk factor.

Onset of post-operative EAT occurred a median of 9 days after congenital cardiac surgery.