RESOURCES UTILIZATION AND OUTCOME FOLLOWING THE GLENN AND FONTAN OPERATION: A MULTI-INSTITUTIONAL STUDY

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.–4:30 p.m.

Session Title: Advances in Congenital Heart Surgery
Abstract Category: 10. Congenital Heart Disease: Pediatric
Presentation Number: 1227-265

Authors: Kevin Hinkle, Jacob Wilkes, Shaji Menon, University of Utah, Salt Lake City, UT, USA

Background: Compared to the Glenn, the Fontan operation is thought to be associated with longer hospitalization and resource utilization. There is a lack of large, multi-institutional and contemporary data on resource utilization and outcomes following the Glenn and Fontan operation. The objective of this study was to evaluate resource utilization and outcomes associated with the Fontan operation in a large multi-institutional cohort.

Methods: Retrospective review of all patients who underwent a Glenn and survived to the subsequent Fontan operation (1/2004-6/2011) using the Pediatric Health Information Systems Database (44 US children's hospitals). Generalized linear regression analyses were performed to evaluate factors associated with resource utilization and mortality.

Results: Of 2190 patients included in the study, 55% were males. The mean age at Glenn and Fontan were 5.2 months and 2.8 years respectively. The mean duration between Glenn and Fontan operation was 2.7 years. The mean length of hospitalization at the Glenn and Fontan operations were 13.5 days and 13.1 days respectively. Post-operative mortality following the Fontan was 1% (n=21). Atrioventricular valvuloplasty was performed in 9% of patients during the Glenn and Fontan each. Following the Fontan, 7% had heart block, 13% had tachycardia, 3% developed stroke, 1% underwent dialysis, and 2% had diaphragm paralysis before hospital discharge. The median cost in 2012 Dollars for the Glenn and Fontan operations were $46,976 and $55,868 dollars respectively.

Conclusions: Pediatric Health Information Systems Database provides a large and comprehensive dataset to evaluate outcomes and resource utilization following Glenn and Fontan. The duration of hospitalization following a Fontan operation is similar to post Glenn hospitalization. However, the cost of hospitalization post Fontan was higher when compared to the Glenn hospitalization.