

National Fontan Operation outcomes at or below 2-years-of-age compared to older than 2- years-of-age

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Abstract

Introduction: Opinion is divided about optimal early timing of the Fontan Operation (FO). While some studies have suggested 3 years-of-age, others have shown good outcomes below 2 years-of -age. We analyzed the impact of age [?]2-years as compared age >2-years on short-term outcome of the FO using a large national database. **Methods:** A retrospective analysis of the Kids Inpatient Database (2009-16) for the FO was done. The groups were divided into those who underwent FO at age [?]2-years (EF) as compared to age >2-years (LF). The data was abstracted for demographics, clinical characteristics, and operative outcomes. Standard statistical tests were used. **Results:** 3381 patients underwent FO during this period of which 1482 (44%) were EF. The mean ages of the EF and LF were 1.6 and 4.3, respectively ($p < 0.001$). LF were more likely to be non-White, female, and have Heterotaxy syndrome. HLHS was more common in EF. There was no difference in the discharge mortality, length of stay, disposition (majority went home), and mean total charges incurred. The overall discharge mortality was low at 0.7% (24/3381). In multivariate analysis: cardiac arrest, acute kidney injury, mechanical ventilation >96 hours, endocardial cushion defect and non-White ethnicity were predictors of a mortality and not age. **Conclusion:** Contemporary outcomes for FO are excellent with equivalent short-term outcomes in both the age groups. Occurrence of postoperative complications, non-white ethnicity and endocardial cushion defect diagnosis were predictive of a negative outcome.

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