

Follow-up after Fontan Conversion

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Objective: Review of patients with Fontan conversion to assess a strategy for these patients.

Methods:

From 1994 to 2010 twenty-eight patients (age 10.5 to 49.5 years, mean 24.2 years) with Fontan modification underwent a conversion from atriopulmonary to total cavopulmonary connection, indications for the operation were "failing Fontan" and refractory arrhythmias. The follow-up data were retrospectively extracted from the outpatient files.

Results:

Follow-up was between 6 month and 16.5 years. The first 15 patients were operated by means of an intracardiac tunnel, after 2001 by means of an extracardiac conduit.

Total mortality was 8/28, with five early postoperative deaths and three deaths in the later follow-up after 14 months, 33 months, and 10,5 years with protein losing enteropathy in two cases and sepsis fulminans in one as cause of death. One patient had a heart transplantation 9 years after Fontan conversion.

At follow-up, there was a recurrence of arrhythmia in 15/23 patients, 10/23 patients were dependent on a pacemaker, 9 patients had atrial tachycardia of whom two required electrical cardioversion, all of them are on anti-arrhythmic medication. Maze operation was performed in four patients at the time of conversion with reoccurring of arrhythmias in three patients.

Exercise tests in the first 12 months after surgery showed worse results than before surgery but improved at follow-up. At their last outpatient visit, 21/23 patients had a actual job as sign of good social re-integration.

Conclusion:

Fontan conversion is a high risk operation in terms of perioperative and intermediate mortality.

Preoperative evaluation and carefully planned anti-arrhythmic surgery is necessary to improve clinical outcome.