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Evaluation of the different therapeutic options in patients with congenitally corrected transposition of the great arteries.

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Objective:

The surgical approach for treatment of congenitally corrected transposition of the great arteries (ccTGA) remains challenging, though ideally one would favor 'anatomical' repair.

We aimed to compare the outcome of different treatment strategies.

Subjects and methods:

We retrospectively collected data from two Belgian surgical centers providing 47 patients (23 males).

Type of operation, demographic and follow-up data was recorded.

Results:

Median age at latest follow-up (FU) was 16 years (y) (0-26). Four patients were lost after a mean FU of 14y. One early death occurred related to prematurity. One patient died unexpectedly at the age of 2 months (m). Six patients with no associated defects did not undergo surgery. At a median FU age of 18y there was no failure of the systemic ventricle and no significant tricuspid regurgitation (TR).

Surgical patients were divided in two groups: univentricular repair (group I) versus biventricular repair (group II). The latter group was subdivided into group IIa in whom the morphologically left ventricle was restored in the systemic circulation and group IIb who underwent physiologic repair.

Group I comprised 13 patients (mean FU 123m). There was no surgical related mortality. One late mortality due to acute ventricular failure was reported.

Group IIa comprised 16 patients (4 atrial/arterial switch, 1 hemi-Mustard/bidirectional Glenn/Rastelli, 11 atrial switch/Rastelli) with mean FU of 127m. Group IIb comprised 7 patients (mean FU 220m). Postoperative mortality was 25 % in group IIa versus 0% in group IIb. There was no late mortality in group IIa whilst 2 patients of group IIb required heart transplantation and one patient had TR 3/4. Re-intervention rate was similar in both groups (respectively 31% and 28%). In each group, 2 patients had mechanical valves. Two patients of group IIa had an atrial flutter. 13 patients required pacemaker implantation (5/7 in group IIb and 6/16 in group IIa). Overall in half of the patients, pacemaker implantation was intervention related.

Conclusion:

At a median FU age of 16y, outcome was not superior in patients who underwent anatomic repair.