

**488 Candidacy for heart transplantation in adult congenital heart disease patients: a single-centre, retrospective, cohort study**

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**Aims:** End-stage heart failure (HF) is the leading cause of death in adult congenital heart disease (ACHD) population. Heart transplantation (HTx) improves prognosis in ACHD end-stage HF but candidacy evaluation, referral pattern, and correct listing timing are not fully elucidated in this population. To evaluate factors associated to refusal from HTx in ACHD patients with end-stage HF referred for HTx evaluation.

**Methods and results:** This retrospective cohort study enrolled consecutive ACHD patients considered for HTx in our institution between 2014 and 2020 and patients undergone HTx between 2000 and 2013. Refusal from HTx served as primary study endpoint. Between 2014 and 2020, 46 ACHD patients were evaluated for HTx, 14 ACHD patients underwent HTx between 2001 and 2013. The main indication to HTx in patients with single ventricle physiology was Fontan failure, while in patients with systemic left ventricle and systemic right ventricle physiology, it was systemic ventricular dysfunction. We compared clinical, anatomical and demographic data of 41 patients accepted for transplantation with 15 patients refused after screening. Risk factors for refusal were: coexistence of multiple high risk features [odds ratio (OR): 3.6; 95% confidence interval (CI): 1.1-12.9; *P* 0.048]; anatomical factors (OR: 14.5; 95% CI: 3.1-68.4; *P* 0.001), out-of-centre ACHD/HTx program referral (OR: 5.3; 95% CI: 1.5 to 19.0; *p* 0.01). Survival in patients accepted for HTx was significantly higher than survival in patients declined from HTx with landmark comparison at 20, 40 and 60 months of 87%, 78%, and 72% vs. 70%, 59%, and 20%, respectively. HTx refusal identifies a high risk ACHD patient subgroup (hazard ratio for overall mortality: 3.1; 95% CI: 1.1-8.3; *P* 0.02).

**Conclusions:** In our study risk factors for refusal from HTx are adverse anatomical features, coexistence of multiple conventional HTx high risk factors and out-of-centre referral. ACHD patients refused from HTx present shorter time to death. Efforts to increase HTx candidacy and to reduce referral delay in tertiary centre are strongly necessary for this growing population.