

What physicians should help how to improve the surgical outcome of adult congenital heart disease?

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With interventional advances, the patients with adult congenital heart disease (ACHD) will increase steadily and rapidly in the population size and the medical complexity. The prevalence of ACHD may range from 4-8/1000 (more than one-tenth of the patients have severe ACHD) in countries with CHD programs. Because of the underlying structural heart disease, preoperative hemodynamic influence, surgical procedures, residual postoperative hemodynamic problems, heart failure is common and is the leading cause of mortality in ACHD. Arrhythmias are also common and would further jeopardize the outcome. Surgical intervention in ACHD may be indicated for those with unrepaired ACHD, and those ACHD with residual hemodynamic problems, with or without concomitant arrhythmia surgery. To improve the outcome, a simple and effective strategy is to have team-based approach.

There are still a lot of unsolved issues for ACHD patients. Team based approach medical care is effective to find out the dilemma and the solution. Thereby, a tentative treatment plan can be achieved, even with known unknown issues. For example, the failed pumping ventricle of ACHD can be biventricle LV, biventricle systemic RV, biventricle subpulmonary RV, and single ventricle. The clinical presentation varies widely. The efficacy of neurohumoral blockade (ACEI, ARB blockade, β -blockers and neprilysin inhibitors) remains unclear. Limited small scale trials revealed improvement in some parameters. Nevertheless, the use of conventional medical therapy, which is the cornerstone treatment of acquired heart failure in general population, is suggested for heart failure for ACHD patients. A team based approach strategy for ACHD care might inspire researchers to know the unknown. During the dynamic process, they shall also recognize the "unknown unknown". The gap of ACHD care is awaiting us to fill.