Percutaneous tricuspid valve implantation: two-center experience with midterm results.

Severe tricuspid valve (TV) dysfunction may lead to surgical TV replacement with a biological valve prosthesis in patients with congenital heart disease. To expand the lifetime of this valve and reduce the number of surgeries, percutaneous TV implantation (PTVI) may be an effective alternative to repeated surgery. We report on our 2-center experience with PTVI. Between 2008 and 2014, 17 percutaneous valves were implanted in 16 patients with TV bioprosthesis dysfunction (9 females) from 2 centers. Median age and weight were 31.3 years (5-77.2) and 65.2 kg (17.7-107); 14 patients had congenital heart disease (univentricular heart with a right atrial to right ventricle bioprosthesis in 3, Ebstein's anomaly of the TV in 5, and other in 6), and 2 had acquired TV dysfunction. All procedures were successful (Melody n=7, Sapien 26 mm valve n=4, Sapien XT 29 mm valve n=6). One valve showed early dysfunction. It was replaced surgically and shortly after that a repeated PTVI was performed. The median duration of follow-up was 2.1 years (3 days to 6.3 years). The percutaneous valve was performing well in 15 of 16 patients. PTVI was safe and effectively improved TV function in all but 1 patient at midterm follow-up. We think that PTVI is a good alternative to repeated surgical TV replacements and that it may reduce the total number of open heart surgeries in
these patients.