

Ross procedure in young patients

Woong-Han Kim, MD, PhD

Department of Thoracic and Cardiovascular Surgery

Seoul National University Children's Hospital, Seoul, Korea

The Ross procedure is one of the important options for patients with aortic valve disease not amenable to repair. Patients need no anticoagulant for aortic valve, and can expect growth of pulmonary autograft in aortic valve position. Although several studies have addressed excellent long-term survival and low morbidities in various age populations, there are absolute needs for reintervention in left and right ventricular outflow tracts (LVOT and RVOT) with time. According to LVOT, we need close observation for dilatation of neo-aortic root or ascending aorta. Some authors have expected a growth potential of a pulmonary autograft, however, progression of aortic root or ascending aorta and associated aortic regurgitation are still important concerns after Ross procedure. Need of frequent re-interventions in RVOT is another problem. In Korea, homograft implantation is not easy to access. The using of bovine jugular valved xenografts or home-made Gore-tex valved graft is another option.

Because of above concerns and disadvantages, The Ross procedure has been a reluctant option for young and small patients for a recent decade. However, as technology improves, the increasing availability of percutaneous valve implantation for both outflow tracts can be another answer to solve above problems.

In the era of percutaneous valve implantation, the Ross procedure can be one of the option for the young patient's aortic valve disease. It may emerge again as an important surgical option for young patients' aortic valve disease.