Aortic valve and left ventricular outflow tract
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THE ROSS OPERATION IN CHILDREN AND YOUNG ADULTS: 11-YEAR RESULTS AND TRENDS FROM THE UNITED KINGDOM NATIONAL DATABASE
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Objectives: To determine UK national results and trends for the Ross operation in relation to all aortic valve interventions.

Methods: We examined the UK Congenital Central Cardiac Audit Database for all aortic valve procedures performed between 2000 and 2011 in children (0-16 years) and young adults (16-30 years). Data capture is 100% and one-year follow up is 99.7% complete.

Results: Two-thousand two-hundred and six aortic valve procedures were done in children and 1824 in young adults, the proportions in the two groups being, respectively: the Ross operation (19% vs 15%), surgical valvuloplasty (9.5% vs 4%), surgical valvotomy (9.5% vs 1%), aortic valve replacement (11% vs 55%), aortic root replacement (4% vs 18%) and balloon valvuloplasty (47% vs 7%). The 30-day and 1-year survival after the Ross procedure is 99.3% and 98.7% respectively, in the last four years achieving 100%. In children, the proportion of balloon valvuloplasty increased from an average of 43% in 2000-2006 to 53% in 2007-2011, whereas the Ross operation decreased from 22% to 16% (P<0.001). In young adults, the figures show an increase from 49% to 58% for aortic valve replacement compared to a decrease from 23% to 9% for the Ross operation (P<0.001). Our own single-centre series of 91 cases also shows standard results for early and long-term survival and freedom from reoperation, but gradually fewer Ross operations performed. The year-on-year changes show a significant decreasing trend locally and nationally.

Conclusions: Despite an excellent track record, the Ross operation is performed less frequently. This is a first step in comparing treatment modalities at national level.