Predictors of aortic events after aortic valve replacement for bicuspid valve stenosis

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We would like to congratulate the authors on their study [1]. A controversial area in cardiac surgery is addressed in a very scientific and academic way. The authors use data from stenotic bicuspid aortic valve (BAV) patients operated on from 1995 to 2000 who underwent aortic valve replacement (AVR) without ascending aorta replacement. Inclusion criteria were aortic diameter between 40 and 50 mm. This historic cohort allows the authors to evaluate long-term aortic events (15-year follow-up) and include patients with aortic diameter between 45 and 50 mm, who at that time were not included in the US guidelines for ascending aorta replacement. Adverse aortic events were experienced in 8 of 153 patients (5.3%) with a mean progression rate of 0.5 mm/patient-year. Cox-regression analysis was performed including only two preoperative variables, hypertension and ascending aorta diameter. No statistical predictors of adverse aortic events were identified. It has been previously reported that aortic dilatation in BAV patients is hereditary [2] and related to its configuration (anterior–posterior vs right–left) [3]. Our group has found body surface area (BSA) and family history of BAV and/or aortopathy to be independent predictors for aortic dilatation [4]. Have the authors taken into account these variables (BAV configuration, family history of BAV and/or aortopathy, BSA) in their regression analysis? Pharmacological treatments such as use of statins and beta-blockers have shown to be protective of aneurysmal dilatation [5, 6]. Taking into account the large cohort the authors are analysing, it would be extremely interesting to know if either is protective of adverse aortic events. Finally, we consider this study as contributing significantly to such a debated topic and therefore congratulate the authors for their endeavour.

REFERENCES