J Heart Valve Dis. 2006 Nov;15(6):768-75; discussion 775-6.

Perimount pericardial bioprosthesis for aortic calcified stenosis: 18-year experience with 1133 patients.

Aupart MR, Mirza A, Meurisse YA, Sirinelli AL, Neville PH, Marchand MA.

Unit of Cardiac Surgery, A. Trousseau Hospital and F. Rabelais University, Tours, France. aupart@med.univ-tours.fr

BACKGROUND AND AIM OF THE STUDY: Aortic stenosis (AS) is the most important cause of aortic valve disease, its prevalence increasing with patient age. The present study formed part of a long-term evaluation on use of the Perimount pericardial valve for aortic calcified stenosis.

METHODS: A total of 1133 consecutive patients who underwent aortic valve replacement (AVR) with a Perimount pericardial bioprosthesis for degenerative AS between July 1984 and December 2003 at the authors' institution, was followed up in 2004. Among the patients (716 males, 417 females; mean age 72.6 years), 997 were in sinus rhythm, and the mean NYHA functional class was 2.3. Preoperative echocardiography indicated a mean gradient of 56 mmHg, a peak gradient of 89 mmHg, and an effective orifice area of 0.6 cm2. Associated procedures were required in 336 patients.

RESULTS: All patients but 18 (1.5%) were followed up for an average of 5.5 years postoperatively; thus, the total follow up was 6,180 patient-years. Operative mortality was 2.8% (n=32), and there were 330 late deaths. At 18 years the actuarial survival rate was 22 +/- 4%. Among the 725 patients followed, 80% were in sinus rhythm and 98% in NYHA classes I or II. Valve-related complications included 39 thromboembolic episodes, 24 endocarditis, 22 anticoagulant-related hemorrhage, 28 reoperations, and 19 structural valve failures. A total of 54 patients died from valve-related causes (13 embolic events, two endocarditis, two hemorrhage, one structural failure, 36 unknown causes), and 57 died from cardiac failure. Neither thrombosis nor hemolysis was observed. At 18 years, freedom from embolism was 92 +/- 2%, from endocarditis 93 +/- 4%, from hemorrhage 95 +/- 2%, from reoperation 62 +/- 11%, from valve failure 68 +/- 12%, and from all complications 47 +/- 8%. Among patients aged >60 years, the 18-year actuarial freedom from reoperation was 76 +/- 14%, and from valve failure 85 +/- 8%. CONCLUSION: With a low rate of valve-related events at 18 years, and an especially low rate of structural failure, the Perimount pericardial prosthesis is a reliable choice for patients with aortic calcified stenosis.

PMID: 17152784 [PubMed - indexed for MEDLINE]