other long-term studies are difficult because of differing baseline characteristics.¹ Comparisons are subsequently provided and summarized in Table 5; however, considerations concerning some key patient cohort differences are lacking.²⁻⁴ These include the following.

First, the continuing patient enrollment during a 20-year period resulted in a limited mean follow-up time: 6.0 ± 4.5 years for aortic valve replacement (AVR) and 6.2 ± 5.6 years for mitral valve replacement. This strategy tends to underestimate events in comparison with similar studies with a much shorter enrollment period like the cited 20-year Edwards Clinical Communiqué, which had a mean follow-up time of 9.0 ± 5.5 years.²

Second, the authors report the actuarial freedom from reoperation because of structural valve deterioration (SVD), which is inherently lower than the freedom from SVD. Therefore the direct comparison with the freedom from SVD as reported by several other studies tends to underestimate the number of events in the current study.^{3,4}

Third, the long inclusion period has resulted in an uneven age distribution over time. Given the mean age difference between the originally reported 10-year experience and the current 20-year report, patients in the AVR and mitral valve replacement cohorts, respectively, must on average have been about 7 and 5 years older during the second decade of the study than during the first decade.^{1,5} Therefore a high number of patients with a relatively short follow-up time might contribute to an underestimation of the incidence of SVD in the elderly groups.²

A further comment is directed at the intriguing incompleteness of Table 5.¹ Age-stratified event rates for AVR from several studies are cited in the last column, headed by the Biocor's 20-year freedom from reoperation because of SVD being $92.1\% \pm 3.9\%$ in patients aged 65 years and older and

$44.5\% \pm 9.2\%$ in those younger than 65 years. However, for 2 studies these readily available data are provided as mean overall rates only.^{3,4} The excellence of these results in the elderly patient groups makes these data indispensable for the overall perspective. The $68\% \pm 12\%$ overall freedom from SVD in Aupart and colleagues' 18-year Perimount experience³ thus breaks down into $99\% \pm 1\%$ for patients aged greater than 70 years, $77\% \pm 12\%$ for those aged 60 to 70 years, and $45\% \pm 15\%$ for those aged less than 60 years. In Yankah and associates' 17-year Mitroflow experience,⁴ the $67.0\% \pm 4.9\%$ freedom from SVD in similar age groups breaks down into $93.0\% \pm 3.0\%$, $60.1\% \pm 6.4\%$, and $45.7\% \pm 13.5\%$, respectively.

We congratulate the authors with the realization of their study spanning so many years and hope to see further results and adequate comparisons in future publications.

Willem J.L. Suyker, MD, PhD
Frans G. Leicher, MD
Department of Cardiothoracic
Surgery
Isala Clinics
Zwolle, The Netherlands

References

1. Mykén PS, Bech-Hansen O. A 20-year experience of 1712 patients with the Biocor porcine bioprosthesis. *J Thorac Cardiovasc Surg.* 2009;137:76-81.
2. Clinical Communiqué: Carpentier-Edwards Perimount pericardial aortic bioprosthesis 20 year results. Irvine, Calif: Edwards Lifesciences; 2003. Available at: <http://www.edwards.com/products/heartvalves/perimountaorticcommuniquepdf.htm>. Accessed April 6, 2009.
3. Aupart MR, Mirza A, Meurisse YA, Sirinelli AL, Neville PH, Marchand MA. Perimount pericardial bioprosthesis for aortic calcified stenosis: 18-year experience with 1,133 patients. *J Heart Valve Dis.* 2006;15:768-76.
4. Yankah CA, Schubel J, Buz S, Siniawski H, Hetzer R. Seventeen-year clinical results of 1,037 Mitroflow pericardial heart valve prostheses in the aortic position. *J Heart Valve Dis.* 2005;14:172-9.
5. Mykén PS, Caidahl K, Larsson S, Berggren HE. 10-year experience with the Biocor porcine bioprosthesis in the aortic position. *J Heart Valve Dis.* 1994;3:648-56.

doi:10.1016/j.jtcvs.2009.04.070

THE SECOND ASSISTANT IN CARDIAC SURGERY

To the Editor:

I thank Dr Zamvar for his appreciative comments¹ on my editorial entitled "The second assistant in cardiac surgery: the challenges and answers."² As Dr Zamvar rightly points out, the position of second assistant is to be seen as a great opportunity for surgical training and not a burden. As surgical trainees, we often have the mindset that surgical training is all about cutting and suturing, of doing rather than watching. The second assistant position in a way enforces a temporary pause in this "cutting and suturing" ritual, allowing the trainee to think and redefine his or her techniques. Indeed, it is very easy for the mind to drift, and the trainee has to make a conscious effort to stay focused. The ability to make sharp observations and stay focused for long durations is often not an innate skill and has to be developed over time. These mental faculties are as important as hand skills in the making of a good surgeon. The second assistant position offers a unique opportunity to develop these skills. I also agree with Dr Zamvar that the new laws enforcing limited hours of working on trainees³ will take away a great opportunity from the current generation of surgical trainees.

T. K. Susheel Kumar, MD
Department of Cardiovascular
Surgery
Children's National Medical Centre
Washington, DC

References

1. Zamvar V. They also serve who only stand and wait. *J Thorac Cardiovasc Surg.* 2010;139:798.
2. Kumar TK. The second assistant in cardiac surgery: the challenges and answers. *J Thorac Cardiovasc Surg.* 2009;137:1311-4.
3. Council of the European Union. The European working time directive. Council Directive. Brussels, Belgium: Council of the European Union; 1993. Publication no. 93/104/EC.1993.

doi:10.1016/j.jtcvs.2009.10.066