functional results after valve replacement for aortic regurgitation from 1976 to 1983: impact of preoperative left ventricular function. Circulation 1985;72:1244–56.
17. Croft CH, Woodward W, Elliott A, Commerford PJ, Barnard CN, Beck W. Analysis of surgical versus medical therapy in active complicated native valve infective endocarditis. Am J Cardiol 1983;51:1650–5.
18. d'Udekem Y, David TE, Feindel CM, Armstrong S, Sun Z. Long-term results of operation for paravalvular abscess. Ann Thorac Surg 1996;62:48–53.
19. Truninger K, Attenhofer Jost CH, Seifert B, et al. Long term follow up of prosthetic valve endocarditis: what characteristics identify patients who were treated successfully with antibiotics alone? Heart 1999;82:714–20.
20. Hetzer R, Deyerling W, Borst HG. Herzklappenchirurgie bei aktiver infektöser Endokarditis. Infektiöse Endokarditis. Klinik Diagnostik und Therapie. Steinkopff Verlag Darmstadt 1984:148–76.
21. Yankah AC, Klose H, Musci M, Siniawski H, Hetzer R. Geometric mismatch between homograft (allograft) and native aortic root: a 14-year clinical experience. Eur J Cardiothorac Surg 2001;20:835–41.

INVITED COMMENTARY

Three principles are important for successful aortic root surgery in patients with endocarditis complicated by abscess formation. First, the surgeon must aggressively and extensively debride all infected tissue. Second, defects may need to be reconstructed, sometimes including pericardial patch closure of fistulas or holes into other cardiac chambers. Finally, aortic valve (and root) replacement with the least amount of foreign body possible (ideally no foreign body) should be performed. Previous reports described the use of prosthetic valves or the preferred option for most experienced surgeons: homograft aortic root replacement. This paper not only addresses the first two principles but reports the use of a stentless aortic valve that is "devoid of fabric material" for aortic valve replacement. Their results are good with an acceptable mortality, good hemodynamic and quality of life outcomes, and, most importantly, a low rate of reinfection (4% in patients treated with stentless valves and 4% for a similar group of patients previously treated with an aortic valve homograft).

Recent U.S. reports show similar early and late results [1, 2], but one paper reported reinfection results similar to the Berlin and Cleveland Clinic experience with the use of nonhomograft prosthetic valves [2]. Therefore, the extensive debridement is probably more important than the choice of prosthesis. However, if a prosthesis free of fabric were more readily available than homografts, most surgeons would likely prefer this to the use of prosthetic valves with extensive fabric.

Use of a stentless aortic valve in lieu of a homograft in this clinical situation has advantages, including ready availability of the stentless valve, access to a variety of different valve sizes, and cost of the prosthesis. Furthermore, at least in the U.S., there has been a chill surrounding the implantation of cryopreserved human tissue because of the risk of transmitting infection.

Unfortunately, the stentless aortic valves approved for use in the United States (Medtronic Freestyle, St. Jude Toronto™ SPV, and Edwards Prima Plus) include fabric material, which therefore violates the principle of minimizing foreign material in an infected field. The approach in this report from Berlin intuitively makes sense, and fits these three principles. Surgeons should look forward to further confirmation from other centers with a low rate of reinfection with this stentless aortic prosthesis.

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References

1. Lytle BW, Sabik JF, Blackstone EH, Svensson LG, Pettersson GB, Cosgrove DM III. Reoperative cryopreserved root and ascending aorta replacement for acute aortic prosthetic valve endocarditis. Ann Thorac Surg 2002;74(Suppl):S1754–7.
2. Hagl C, Galla JD, Lansman SL, Fink D, Bodian CA, Spielvogel D, Griepp RB. Replacing the ascending aorta and aortic valve for acute prosthetic valve endocarditis: is using prosthetic material contraindicated? Ann Thorac Surg 2002;74(Suppl): S1781–5.

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