MANAGEMENT OF DESTRUCTIVE AORTIC VALVE ENDOCARDITIS

Ongoing search for the ideal valve substitute

Igor Vendramin, MD, Andrea Lechiancole, MD, Uberto Bortolotti, MD, Ugolino Livi, MD

Cardiothoracic Department, University Hospital, Udine, Italy

Address correspondence to: I. Vendramin, MD, Cardiothoracic Department,

P. le S.M. Misericordia 15, Udine, Italy

Tel: 39-432-552431; Fax: 39-432-552975

e-mail: vendramin.igor@gmail.com

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To the Editor:

We read with great interest the recent article by Cefarelli et al, who described a method to correct destructive prosthetic aortic valve endocarditis (AVE) using the Biointegral valved-conduit (*BioIntegral Surgical, Inc, Mississauga, Canada*)[1].

In patients with AVE complicated by periannular extension, left ventricular outflow (LVOT) reconstruction is a challenging procedure with a significant operative mortality[2]. Although various biological conduits have been employed such as aortic homografts, xenografts or stentless aortic roots, the most effective approach in this setting still represents a matter of debate. In this complex scenario, repair could be facilitated by availability of a highly versatile aortic valve/root substitute, with an easy, reproducible implant technique.

Cefarelli et al. state that Biointegral represents their first choice in destructive AVE because of its extreme pliability, which allows the proximal suture line of this all biological valved-conduit to adapt to the irregular subannular surface, thus reducing possible post-implant mechanical solicitations[1]. However, with this technique a modified Bentall procedure is required and the coronary ostia have to be reimplanted to the conduit, further increasing the cross-clamp time.

We have previously reported the use of a stentless bioprosthesis, the Sorin Pericarbon Freedom (SPF) (*LivaNova, Saluggia, Italy*), to treat patients with destructive AVE, requiring LVOT reconstruction[3]. This valve was implanted using a modified technique, by inverting it into the left ventricle to facilitate the proximal suture while the distal suture was carried out in sub-coronary position. In 40 patients, 90% with a previously implanted aortic prosthesis, we observed 2.5% 30-day mortality with 96% freedom from infection relapse and 76% survival at 5 years. Unfortunately, the SPF is no longer on the market despite some advantageous features, as its availability in different sizes and ease of implant; its pericardial inflow skirt was

ideal for reconstruction of the LVOT and the distal subcoronary suture, avoiding coronary ostia reimplantation, permitted a significant reduction of cross-clamp time. In cases of destructive AVE, we support the use of all-biological substitutes, as advocated by Cefarelli et., but would welcome a device possibly with the features of SPF for easier and reproducible implantation and hopefully longer durability.

REFERENCES

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