LETTERS TO THE EDITOR

Homograft replacement of the mitral valve

To the Editor:

In the February 1996 issue of the Journal, Acar and collaborators published an article titled: "Homograft Replacement of the Mitral Valve: Graft Selection, Technique of Implantation, and Results in Forty-three Patients" (1996;111:367-80). We congratulate the authors for their interest in extending the present limitations of mitral valve repair by the use of a mitral valve homograft.

We wish to make the following corrections:

In reference to Morea's article¹ (reference 19), the Biocor porcine stentless mitral valve was developed and is manufactured by Biocor Indústria e Pesquisas Ltda from Belo Horizonte, Brazil.

The Biocor porcine stentless mitral valve is made entirely of biologic material, and new chordal insertions including a thin slice of papillary muscle are "sandwiched" between xenograft pericardial patches, thereby securing the chordal insertion firmly.

Morea's article clearly states that healing between pericardial tissue and papillary muscles was satisfactory.

Occasional chordal rupture was always due to previous endocarditis. We have used the Biocor mitral stentless valve in more than 120 patients with the longest follow-up being 4 years. Although there is a definite learning curve related to use of the new valve and new technique, current excellent results makes this valve our valve of choice for the mitral position in our institute, especially when patient criteria are met as stated in published papers.²⁻¹⁰

Valve mismatch and chordal malalignment must be prevented to avoid complications such as leaflet prolapse, valve insufficiency, and leaflet tear. The use of a mitral ring will ameliorate any valve dysfunction when there is minor mismatch and malalignment. If one wants to be consistent in using only biologic tissues, it is advisable to use a pericardial mitral ring to correct mild mismatches.

Papillary muscle structure is less resistant than suture material. Therefore the use of pledget-supported sutures (preferably of pericardial tissue) may prevent muscle laceration.

In none of our patients was the use of pledget-supported sutures responsible for any complications. It must be stressed that accurate technique, fine needles, avoidance of more than one needle entrance, and avoidance of excessive traction on the biologic tissue are vital. Failure to do so is a common cause leading to unfavorable results. With experience, the aforementioned complications can be prevented.

We too believe in the importance of preserving annuloventricular continuity in mitral valve surgery. Although the use of new devices and technique does have a clear learning curve, quality of life, left ventricular remodeling,

and longer patient survival may be achieved through these new techniques.

Prof. Mario Vrandecic

Prof. Bayard Gontijo

Prof. Fernando Fantini

Biocor Institute

Caixa Postal 106

Belo Horizonte, Cep: 30161-970, Brazil

REFERENCES

1. Morea M, de Paulis R, Galloni M, Gastaldi L, Summa M. Mitral valve replacement with the Biocor stentless mitral valve: early results. *J Heart Valve Dis* 1994;3:476-82.
2. Vrandecic M, Gontijo B, Fantini FA, Gutierrez C, Silva JAP, et al. Anatomically complete heterograft mitral valve substitute: surgical technique and immediate results. *J Heart Valve Dis* 1992;1:254-9.
3. Vrandecic M, Gontijo B, Fantini FA, Silva FAP, Barbosa JT, et al. Transplante de valva mitral heteróloga. Nova alternativa cirúrgica: estudo clínico inicial. *Rev Bras Cir Cardiovasc* 1993;8:83-90.
4. Vrandecic M, Gontijo B, Fantini FA, Silva JAPS, Barbosa JT, et al. Heterologous mitral valve transplant: new alternative for mitral valve replacement—one year clinical follow-up. In: D'Alessandro L, editor. *Heart surgery 1993*. Rome, Italy: Casa Editrice Scientifica Internazionale, 1993:57-68.
5. Vrandecic M, Gontijo B, Fantini FA, Oliveira OC, et al. Porcine stentless mitral heart valve substitute: short term clinical data. *J Cardiovasc Surg* 1994;35 (Suppl 1):41-5.
6. Vrandecic M, Gontijo B, Fantini FA, Oliveira OC, Martins IC, et al. Porcine stentless heart valve substitutes: technical and clinical data—short and mid-term follow-up. Impress. In: Piwnica A, Westaby S, editors. *Stentless bioprostheses*. Oxford: ISIS Medical Media, 1994:195-200.
7. Vrandecic M, Gontijo B, Fantini FA, Silva JAP, Gutierrez C, et al. Heterologous stentless mitral valve transplant: new approach for mitral valve replacement. *Cor Eur* 1994;3:130-3.
8. Vrandecic M, Gontijo B, Fantini FA, Oliveira OC, Martins IC, et al. The mitral and aortic porcine stentless heart valves: new concepts in design and tissue tanning—short- and mid-term clinical follow-up. In: Gabbay S, Frater RWM, editors. *New horizons and the future of heart valve bioprostheses*, 1st ed. Austin (TX): Silent Partners, 1994:143-70.
9. Vrandecic M, Fantini FA, Gontijo B, Oliveira OC, Martins IC, et al. Surgical technique of implanting the stentless porcine mitral valve. *Ann Thorac Surg* 1995;60:S439-42.
10. Vrandecic M, Gontijo B, Fantini FA, Silva JAP, Gutierrez C, et al. Heterologous mitral valve transplant: the first 50 patients clinical analysis. *Eur J Cardiothorac Surg* 1995;9:69-74.

12/8/76550