Letter to the Editor

Coronary flow in sinus grafts*

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Keywords: Sinus graft; Coronary flow

I read with interest the article of De Paulis et al. “Coronary flow characteristics after a Bentall procedure with or without sinuses of Valsalva” in the July 2004 issue of the European Journal of Cardiothoracic Surgery [1], which examines the effects of the pseudosinuses of a ‘new conduit’ with pseudosinuses (Gelweave Valsalva™, Terumo Vascutek, Renfrewshire, Scotland, UK) upon coronary blood flow. While our observations on the subject of how the bulb geometry may modify coronary flow are comparable with those of the authors, i.e. the effect is minimal, if any, we have to call their attention that the concept of tube graft modified with pseudosinuses is certainly not a ‘recent’ development, but have been already introduced in the very early 1990s [2] and used successfully by us, as well as by others [3] (Fig. 1).

References


*The authors of the original paper [1] were invited to comment on this Letter to the Editor but declined the offer.

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Letter to the Editor

REV (Lecompte) procedure: how much better than the Rastelli operation?

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Keywords: Rastelli; REV; Trasposition of the great arteries; Follow-up; Reoperation

In a interesting article recently published in the EJCTS [1], Lee and co-workers compare their results with the Rastelli operation and the REV procedure (termed by the authors “Lecompte procedure”) for patients with
Transposition of the great arteries, ventricular septal defect and left ventricular outflow tract obstruction (TGA, VSD, LVOTO). Late results differed significantly in the two surgical groups: reoperations for right/left ventricular outflow tract obstruction (RVOTO, LVOTO) were more frequent in the Rastelli group, so that freedom from reoperation proportion was 40% for the Rastelli group and 96% for the REV group. Other institutions, who had the opportunity to use both these procedures, reported similar data [2]. Although the authors’ results are excellent, their incidence of reoperation for RVOTO in the REV group is somehow surprising: five of 24 survivors, or 21%, in an average follow-up interval of 5.9 years. The authors did not employ the Lecompte manoeuvre nor the aortic wedge resection; the native pulmonary artery trunk (PAT) could be directly anastomosed to the upper part of the right ventriculotomy just by widely dissecting the pulmonary branches. This attitude has been reported previously [3]. Dr Lecompte always recommended to resect a generous wedge portion of the ascending aorta, in order to avoid excessive traction on the repositioned pulmonary confluence [4]. What has, then, to be expected if the pulmonary confluence is left behind the ascending aorta? The upper ventriculotomy may well be at reach of the native PAT, but the anastomosis will cause, in my view, undue traction, ‘elastic band’ effect and reduction of the diameter of either pulmonary branch, depending on what side of the aorta is chosen for the anastomosis itself.

REV, in this aspect, greatly differs from the Arterial Switch Operation (ASO) [5]: the site of PAT reimplantation is not another semilunar valve annulus but a right ventriculotomy, the upper limit of which is dictated by the position of the aortic valve. The author’s parallel between these two techniques seems to me inappropriate.

The authors state that Vouhé and co-workers [2], who adopted the anterior relocation of PAT, found an incidence of RVOTO similar to theirs (six patients, 26%) at 55 months average follow-up. In fact, Vouhé’s definition of residual obstruction was rather broad (>25 mmHg RV-PA gradient), only two of his patients (5.7%) required reoperation. In Lecompte’s series, 18 of 117 long-term survivors (15%) were reoperated on because of RVOTO, in an average follow-up interval of 7.6 years.

The authors claim that the cause of obstruction was calcification of the monocusp valve. This may well be a contributing factor, but I wonder whether the spacial arrangement of the great arteries has more to do with the elevated incidence of RVOTO.

In conclusion, the authors must be congratulated for their interesting analysis of the Rastelli and REV procedures. I wonder whether the superiority of late results with the REV procedure could not have been even more apparent, had Lee and co-workers adhered strictly to Lecompte’s description of this ingenious procedure.

References

*The authors of the original paper [1] were invited to comment on this Letter to the Editor but declined the offer.

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Reply to the Letter to the Editor
Reply to Di Carlo
REV (Lecompte) procedure: how much better than the Rastelli operation?

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Keywords: Lecompte procedure; Trasposition of the great arteries; Pulmonary outflow tract; Monocusp valve

We appreciate the comments of Dr Carlo on our article. In the Lecompte procedure, the anteriorly located pulmonary bifurcation was the possible cause of pulmonary outflow tract obstruction [1]. To solve this problem, Lecompte resected a generous part of the ascending aorta to create enough space in the anterior mediastinum for the pulmonary outflow tract. So the procedure became more complicated, involving transection of the aorta and reanastomosis. In our series, we did not use the Lecompte maneuver in any patient even when the great arteries had an anteroposterior relationship and could bring directly the main pulmonary artery to the right ventricle, because orthotopically