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Commentary: Changing just enough

Luca P. Weltert, MD,^a and
Michele Di Mauro, MD, PhD, MSc Biostat^b

In retracing the long road of the aortic root surgery, we discover that cardiac surgeons have been pervaded by the desire to reduce their own intervention on the aortic root to what really is necessary, joining the concept of “changing just enough.” Hence, if the Bentall-De Bono procedure and its modifications were aimed at replacing both valve and aortic root,^{1,2} demonstrating that the technical challenges related to reimplanting of the coronary ostia were acceptable, on the other hand, in presence of normal cusps, the goal of surgery became with time just replacing the aortic root, sparing normal cusps.^{3,4}

Historically, 2 names are associated with the birth of valve-sparing root repair (VSRR), Maghdi Yacoub and Tirone David, fathers of the remodeling and the reimplantation procedures, respectively.^{3,4} These are 2 different approaches with the same purpose, either focusing on preserving the shape of the trilobate Valsalva sinuses or stabilizing the valve inside a straight tube. The latter approach was then modified when De Paulis and colleagues⁵ introduced the Valsalva graft that combined the stability of an industrially woven fabric tube with the presence of a bulge mimicking the Valsalva sinuses. However, the procedure has been more art than science for years, taking 10 years or longer to be standardized, both in terms of technique and instruments, such as the caliper introduced by Schäfers and colleagues,⁶ to finally make the operation reproducible by most surgeons.

Following this trail, Urbanski and colleagues⁷ drive attention to the possibility of restoring the anatomical relationship

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CENTRAL MESSAGE

Urbanski and colleagues reported an awesome durability of aortic root repair using selective sinus replacement, joining the concept of “changing just enough.”

among the sinotubular junction, aortic root, and cusps without annulus downsizing. In few words, they replace just enough, that is, just the pathologic sinus or sinuses.

The durability reported in this paper is awesome, with a freedom from significant aortic regurgitation of 98% and 94% at 10 and 15 years, respectively. The latter results are similar to the ones reported for other VSRR procedures: freedom from moderate-or-severe aortic insufficiency at 10 and 15 years, reported by David,⁸ was 92.9% and 89.4%, respectively. De Paulis and colleagues⁵ reported slightly greater durability using a graft with sinuses; in the case of remodeling procedure, it was 94% at 10 and 15 years.⁹ In conclusion, the key, as usual, is in patient selection; in fact, we do not assume different VSRR procedures as conflicting but as parts of the same armamentarium to tailor the right procedure for the right patient.

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From the ^aDepartment of Cardiac Surgery, European Hospital, Rome, Italy; and ^bCardio-Thoracic Surgery Unit, Heart and Vascular Centre, Maastricht University Medical Centre (MUMC), Maastricht, The Netherlands.

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Address for reprints: Michele Di Mauro, MD, PhD, MSc Biostat, Cardio-Thoracic Surgery Unit, Heart and Vascular Centre, Maastricht University Medical Centre (MUMC), P. Debyelaan 25, 6202 AZ, Maastricht, The Netherlands (E-mail: mdimauro1973@gmail.com).

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