“Single coronary” in transposition of the great arteries: Why are we still talking about it?

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Miyamoto and colleagues¹ describe an ingenious variation to the already published in situ techniques for single coronary reconstruction in patients with d-transposition of the great arteries (TGA). Their technique attempts to address one of the main long-term issues with the in situ techniques of baffle shrinkage leading to late ischemia. The late fibrosis of artificial material or pericardium was first addressed by the Imai technique by using the nonfacing sinus wall for the baffle.² Miyamoto and colleagues¹ state that their technique offers a further improvement, in that the baffle instead of being the size of one sinus is half the aortic circumference. This allows coronary unroofing, when required, to not be limited by the size of the baffle. Conversely, a larger baffle may accentuate the other well-described late complication with the in situ techniques: neopulmonary stenosis. With a follow-up period of only 6 months, the impact of this technique on the incidence of these late complications remains unknown. However, the technique is ingenious, and the authors are very careful to state that this is a valuable method in “an inseparable coronary orifice in a single coronary artery when the intramural main coronary artery passes between the great arteries.” Why are the authors so specific? Why are there so many techniques for one “entity”? When we tell a colleague that there is a patient with TGA and a “single coronary,” do they know what we are telling them?

A “single coronary” in the literature and in practice does not describe a specific entity because many physicians use this term to describe 2 distinctly different entities. The first is a dual coronary system arising from a single aortic sinus via 2 ostia with an incidence of 10%. The second is a coronary system arising from 1 aortic sinus via 1 ostium with an incidence of 5%.³⁻⁵ Keeping this in mind, the multiple techniques start categorizing themselves. Most agree that if the coronary system arises from 1 aortic sinus but has 2 orifices, the orifices should be separated and transferred to the neo-aorta with a generous trap door. On the other

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Central Message

Single coronary in TGA, a term that means different things to different clinicians, would benefit from a standard nomenclature.

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hand, if the 2 orifices are “inseparable,” they are effectively 1 orifice and can be grouped in this subcategory of a single ostium. There is an even rarer but well-defined cohort of patients with a single ostium arising from the right facing sinus with the left main traveling between the great vessels. In these patients, the left main is often intramural but not always. It is in these cases when many congenital heart surgeons start to consider in situ techniques for coronary reconstruction. This is where Miyamoto and colleagues¹ recommend that their technique be applied. If a standard nomenclature could be established to describe single coronary systems arising from 1 aortic sinus in TGA, then the authors would not have had to use 20 words to describe the lesion for which their technique is effective. Also, this would allow the literature on this topic to be more uniform, organized, and directed.

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