


I read with great interest the paper by Kari et al. who reported their results of a Marfan cohort that was treated with the non-modified David I procedure. The early mortality rate was 2%. The survival rates at 4 years and 8 years were 98% and 90%, respectively. The rate of freedom from root or valve reoperation at 4 years was 97% and at 8 years it was 97%. One patient required mechanical aortic valve replacement (AVR) because of progression to aortic regurgitation. The authors showed that the original David I procedure resulted in favourable mid-term outcome [1]. I would like to add some thoughts about the creation or not of neo-sinuses. Grande-Allen et al. in their finite element study showed that valve-sparing techniques which allowed the potential for sinus space formation (the tailored cylindrical graft, the pseudosinus graft) resulted in simulated leaflet stresses that were closer to normal than the cylindrical technique [2]. David et al. noticed that the creation of neo-aortic sinuses remains a controversial issue with aortic valve sparing (AVS) operations. They have never used the Valsalva graft as the aortic annulus will be placed inside a spherical structure instead of a cylindrical structure, such as nature created the semilunar valves. They have created neoaortic sinuses by placing darts in a tubular Dacron graft in the spaces between the commissures [3, 4]. This manoeuvre reduces the diameter of the sinotubular junction at a rate of 1 mm for each 3 mm of plication. But they have been unable to show that the neo-sinuses improve the durability of the AVS procedure. So, they finally plicate the spaces in between commissures if they notice, after the implantation of the aortic valve, that the intercommissural distance of a specific cusp prevents the cusp from coapting with others [4]. It is also interesting that Schmidtfle et al. showed their first encouraging short-term results with the new prostheses with three separate sinuses of Valsalva that was used for AVS operations. The creation or not of aortic sinuses for AVS operations is an important issue and it remains to be proven.

Conflict of interest: None declared.

References


