Is there any difference in aortic wall quality between patients with bicuspid aortic valve stenosis and those with bicuspid aortic valve insufficiency?

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We read with a great interest the manuscript by Benedik et al. [1] published in the recent issue of European Journal of Cardio-Thoracic Surgery. Benedik et al. should be congratulated for prospectively addressing the issue of proximal aortic disease in aortic valve stenosis vs aortic valve insufficiency in a reasonable number of consecutively enrolled patients. The background of this study is of great interest and absolutely well-taken, as patients with aortic valve insufficiency have been repeatedly demonstrated to be at higher risk of late aortic events after isolated aortic valve replacement (AVR) surgery [2]. The findings of this study are in line with the previous reports and support once again common surgical observation that, in terms of aortopathy, aortic valve insufficiency is a different clinical entity when compared with valve stenosis.

However, we would like to focus our comment on the bicuspid aortic valve (BAV) entity. The authors addressed this issue in their previous manuscript [3] and were unable to find any difference in the aortic wall cohesion between patients with tricuspid aortic valve (TAV) and those with BAV disease. Results from their previous study [3] may explain the fact that the authors did not split their study population into TAV and BAV cohorts in their current series [1]. However, aortic valve stenosis was the predominant valve pathology in the majority of patients in both (i.e. TAV and BAV) cohorts in their comparative analysis [3] and barely 9 (5%) patients with BAV insufficiency were included. Our recent data strongly suggest that aortopathy in BAV stenosis is predominantly of haemodynamic origin and has a comparable clinical course as an aortopathy in TAV stenosis [4]. However, BAV is a heterogeneous disorder [5] and patients with an isolated BAV insufficiency (so-called root phenotype) may have a completely distinct form of aortopathy that may follow a different clinical course after AVR surgery [6]. Therefore, the results from comparative analysis of aortopathy between patients with BAV and those with TAV stenosis may not be generalizable to the whole BAV population.

As the recent study [1] includes a reasonable number of patients with aortic valve insufficiency and a significant proportion of them are presumably bicuspid (i.e. share the typical features of root phenotype), differential analysis of BAV and TAV aortopathy in the stenosis and insufficiency subgroups would be very welcoming. Potentially, this supplemental analysis would be a nice contribution to the controversial area of BAV-associated aortopathy.

REFERENCES