

Valvular heart disease in the elderly: more questions than answers

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We are grateful for the opportunity to respond to Chen and Yiu's editorial comment on our article "Large-scale community echocardiographic screening reveals a major burden of undiagnosed valvular heart disease in older people: the OxVALVE population cohort study" (1).

Although aortic sclerosis was the most common abnormality in the OxVALVE study, this was not classified as "significant" valvular heart disease (VHD) in the same way as moderate or severe valve lesions. In contrast, Nkomo *et al.* focused purely on moderate or severe VHD, while the EuroHeart survey was based in the secondary care hospital setting, where only the most clinically significant disease would be seen (2,3).

Nevertheless, aortic sclerosis and mild mitral regurgitation (the two most common valve lesions) must be accounted for in any study of this kind. Although aortic sclerosis is associated with low annual risk of progression to hemodynamically significant aortic stenosis, it still carries an increased risk of adverse cardiovascular events (4). In contrast, it is not clear at this stage what effects (if any) mild mitral regurgitation has on cardiovascular outcomes. Thus, while aortic sclerosis and mild mitral regurgitation may seem relatively trivial diseases in the short term, their longer term implications may be profound—current life expectancies of men and women aged 65 years in the United Kingdom are 18.5 and 20.9 years, respectively (5). Based on 5-year studies, a 1.8% risk of progression from aortic sclerosis to aortic stenosis per annum projects to a much more significant 30% risk over a 20-year time frame. Moreover, this projection assumes a constant rate of progression, which is almost certainly incorrect based upon current understanding of the

biology of valve calcification (6).

As Chen and Yiu point out, a major element missing from the OxVALVE study is the assessment of clinical outcomes. The association between moderate or severe VHD and excess mortality shown in the landmark study by Nkomo *et al.* is now of historic relevance given the significant progress that has been made in the management of VHD. In particular, there have been improved surgical outcomes despite increasing patient complexity (7) and advances in percutaneous intervention. Overall life expectancy of those with bicuspid aortic valves is the same as those without (8), and this should be our aim for other valve lesions.

We are currently in the advanced stages of planning the next phase of the ongoing OxVALVE study where we will assess clinical outcomes and repeat echocardiography to assess disease progression in those with documented VHD, and determine the incidence of new VHD in those with a normal baseline echocardiogram. We hope that these studies will help us address some of the pressing unanswered questions in VHD.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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