

Dr Brinster. You state that those patients usually had their valves sacrificed if it needed a complex repair, is that correct?

Dr Lau. Right. If we weren't happy with the leaflets and thought they would need something extensive in terms of cusp repair, then we would replace those valves.

Dr Brinster. Approximately 20% of the VSRRs were in the BAV group. Do you have any idea of the total number of patients with BAV coming for aortic root replacement or VSRR procedure so we know how selective this repair procedure was?

Dr Lau. For trileaflet aortic valves, we valve spare approximately one-third of them. In the BAV group, if we separate into primarily aortic stenosis versus AI, in the insufficiency group we valve spare approximately 20% of those. The reasons for not valve-sparing vary. If they are older patients, in their upper 60s, 70s, we generally don't spare those. Our recent article on aortic reconstruction showed that the freedom from reoperation is excellent even if you replace and perform a Bentall operation. If the leaflets are damaged or very thin with lots of fenestrations, or there is calcification, which is a poor marker in the mid and long term, then we don't spare those.

Dr Brinster. So, you are saying 80% of the patients who presented with BAVs with AI had a Bio Bentall performed?

Dr Lau. Bio or mechanical.

Dr Brinster. Your results are excellent, and I think the Bio-Bentall is probably the gold standard, especially with the conflicting data. In terms of the durability of this repair, you had no patients immediately postoperatively with echocardiography demonstrating anything greater than mild, so no moderate, no severe, but at 5 years there was approximately 8% in the total group for BAV repair. You didn't include how many patients were at risk at that 5-year marker. Maybe you could comment on that and whether this gives you any concern for the practice of BAV repair or bicuspid VSRR considering they have moderate AI at 8% at 5 years?

Dr Lau. The 8% is actually not at 5 years; it is of the total follow-up period. So when we looked into which patients had moderate AI, it was actually those who were early in the experience, so they were approaching the 10- to 12-year range.

So, do I have some concern? I do, because a recent article from the German group, Klotz and Sievers, showed that when they compared trileaflet valves with BAVs, they really didn't see a difference until that 10-year mark, and when they performed a landmark analysis at 10 years, there was a significant difference in the need for reintervention for bicuspid valves. So I wonder if we are seeing the natural progression of bicuspid valves in this situation.

Dr Brinster. Excellent talk and manuscript. More food for thought for this challenging pathology.