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Commentary: If you can't ride 2 horses at once, you shouldn't be in the circus

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In patients with aortic stenosis (AS), chronic elevation in afterload leads to progressive compensatory left ventricular hypertrophy/fibrosis and left atrial enlargement, the latter portending an increased risk of atrial fibrillation (AF). Still, the prognostic influence of AF in patients with AS remains unclear, and current guidelines do not incorporate the presence of AF into recommendations regarding the timing of aortic valve replacement (AVR).¹ In this context, the present study by Kubala and colleagues² exploring the prognostic influence of AF in patients with severe AS is timely.

In this retrospective multicenter study of 1838 patients with severe AS, 593 patients (32%) had coexistent AF, which was diagnosed based on a single electrocardiogram. Of note, this probably undercaptured patients with paroxysmal AF and underestimated the true burden of AF. In addition, granular data regarding the pattern and duration of AF were notably absent. Nevertheless, in multivariable analyses, AF was a strong predictor of mortality in patients with severe AS, whereas AVR was associated with a survival benefit in patients with severe AS and AF. Again, these findings were recapitulated in the survival analysis wherein patients with severe AS and AF who were managed conservatively had a striking 5-year survival of just $17\% \pm 4\%$. In addition, the survival benefit associated with AVR in this population extended to those with no or minimal symptoms. In the wake of recent data from the Randomized Comparison of Early Surgery Versus Conventional Treatment in

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CENTRAL MESSAGE

An advantage of AVR through a sternotomy is the ability to reliably treat all lesions simultaneously. Concomitant ablation should be performed during AVR in patients with AS and AF.

Very Severe Aortic Stenosis (RECOVERY) and Aortic Valve Replacement versus Conservative Treatment in Asymptomatic Severe Aortic Stenosis (AVATAR) trials,^{3,4} a paradigm shift toward earlier treatment for asymptomatic severe AS may be warranted, and the present study certainly adds impetus for further investigation regarding the merit of prompt intervention based on the presence of AF.

Is AVR a panacea for patients with severe AS and AF? Initially, these results appear encouraging; however, it is important to recognize that patients with AF still had significantly inferior 5-year survival after AVR compared with those in sinus rhythm ($77\% \pm 2\%$ vs $86\% \pm 2\%$; $P < .001$). Although there were important differences in risk profiles between the groups, the fact that only 2 patients ($<1\%$) in the entire series underwent concomitant ablation at the time of AVR stands out. In the context of current guidelines that endorse surgical ablation in patients with AF undergoing isolated AVR (Class I, Level B),⁵ this figure is surprising, and stands markedly lower than even the rate of 39% reported in a recent analysis of the Society of Thoracic Surgeons Adult Cardiac Surgery Database.⁶ A modest addition of 20 to 30 minutes of crossclamp time required to perform a Cox-maze IV procedure confers a 5-year freedom from AF in the range of 70% to 80%,⁷ and may in turn restore a subset of patients with severe AS and AF to the post-AVR survival curve of those with AS alone.

Compared with transcatheter interventions and other minimally invasive surgical approaches for AS, which are limited in their ability to address coexistent AF, a

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fundamental advantage of surgery through a median sternotomy is the ability to reliably address both lesions simultaneously. In low- and intermediate-risk patients with severe AS, might the presence of AF sway us to recommend concomitant surgical ablation and AVR over transcatheter interventions? On the other hand, the ongoing WATCHMAN for Patients With Atrial Fibrillation Undergoing Transcatheter Aortic Valve Replacement (WATCH-TAVR) trial will inform us whether or not transcatheter aortic valve replacement and left atrial appendage occlusion is a viable strategy for patients with severe AS and AF.

Whereas the present study presents a compelling case for the prognostic value of AF in patients with severe AS, additional studies that provide more granular data regarding the pattern and duration of AF and explore the safety and efficacy of surgical and transcatheter approaches will more clearly define the subset of patients who stand to benefit most from this strategy.

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