References

1. Petersen J, Vettorazzi E, Hakmi S, Alassar Y, Meyer C, Willems S, et al. Should concomitant surgical ablation for atrial fibrillation be performed in elderly patients? *J Thorac Cardiovasc Surg*. 2021;161:1816-23.e1.
2. Thomas SP, Guy DJ, Boyd AC, Eipper VE, Ross DL, Chard RB. Comparison of epicardial and endocardial linear ablation using handheld probes. *Ann Thorac Surg*. 2003;75:543-8.
3. Melby SJ, Zierer A, Bailey MS, Cox JL, Lawton JS, Munfakh N, et al. A new era in the surgical treatment of atrial fibrillation: the impact of ablation technology and lesion set on procedural efficacy. *Ann Surg*. 2006;244:583-92.
4. Schaefer A, Schofer N, Goßling A, Seiffert M, Schirmer J, Deuschl F, et al. Transcatheter aortic valve implantation versus surgical aortic valve replacement in low-risk patients: a propensity score-matched analysis. *Eur J Cardiothorac Surg*. September 30, 2019 [Epub ahead of print].
5. Iturra SA, Suri RM, Greason KL, Stulak JM, Burkhart HM, Dearani JA, et al. Outcomes of surgical aortic valve replacement in moderate risk patients: implications for determination of equipoise in the transcatheter era. *J Thorac Cardiovasc Surg*. 2014;147:127-32.
6. Badhwar V, Rankin JS, Ad N, Grau-Sepulveda M, Damiano RJ, Gillinov AM, et al. Surgical ablation of atrial fibrillation in the United States: trends and propensity matched outcomes. *Ann Thorac Surg*. 2017;104:493-500.
7. Quader MA, McCarthy PM, Gillinov AM, Alster JM, Cosgrove DM III, Lytle BW, et al. Does preoperative atrial fibrillation reduce survival after coronary artery bypass grafting? *Ann Thorac Surg*. 2004;77:1514-22; discussion 1522-1524.
8. Ngaage DL, Schaff HV, Barnes SA, Sundt TM III, Mullany CJ, Dearani JA, et al. Prognostic implications of preoperative atrial fibrillation in patients undergoing aortic valve replacement: is there an argument for concomitant arrhythmia surgery? *Ann Thorac Surg*. 2006;82:1392-9.

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Commentary: Concomitant atrial fibrillation ablation: The forgotten procedure

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CENTRAL MESSAGE

Is concomitant atrial fibrillation ablation a procedure that should be considered in elderly patients?

Should we operate on elderly patients? And, if we operate on them, should we provide them with complete treatment of their disease? The answers to these 2 questions seem obvious, and we are convinced that vast majority of the cardiac surgeons would respond affirmatively to both. In reality, however, the problem of combined surgeries in the elderly is multifaceted; not only must we consider operating on an aging and perhaps fragile population, but we also have to perform complex combined procedures and achieve the same results expected in younger patients. From the perspective of surgical risk evaluation, this seems counterintuitive, and several previous articles have reported the negative impact of age on the postoperative outcomes after cardiac surgery. Therefore, we should always carefully estimate the risk–benefit balance in these very delicate patients.

Regarding surgical ablation of atrial fibrillation (AF), prolonging an operation to treat a "minor" problem might be considered inappropriate in these patients. But is AF really a "minor" problem? Previous studies have clearly shown that if left untreated, AF after cardiac surgery has a negative impact on life expectancy and stroke rate.[1] The study of Petersen and colleagues[2] can certainly aid the decision of when to pursue treatment of this frequently forgotten disorder. It demonstrates that concomitant AF ablation can be performed safely and does not have a

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negative impact on postoperative outcome even in elderly patients. There were no procedure-related complications, encouraging us to conduct this procedure more frequently and without reluctance, although we cannot underestimate the increased need for a postoperative pacemaker that the authors reported (8.5%, followed by a further 2.2% during follow-up). Moreover, the study did not focus on ablation associated only with mitral valve surgery but involved a wider range of concomitant surgeries, including coronary artery bypass grafting (CABG) and aortic valve surgery.

It is certainly interesting to note that concomitant CABG and double-valve procedures represent negative factors in terms of AF recurrence. In particular, although the effect of double-valve surgery was independent of age, concomitant CABG had a negative impact on recurrence specifically in elderly patients, and the hazard ratio in this subgroup of patients was significantly different when adjusted for age. The authors were able to characterize the results for each specific surgery, although this came at the cost of a more heterogenous population, which we is the most important weakness of the study. The heterogeneity of the population was also associated with heterogeneity of surgical techniques and long-term assessment performed. Therefore, these results, although interesting, require further validation in larger and more specific studies.

The use of standardized outcome measures has been advocated to compare results among studies[3]; for instance, in the study of Petersen and colleagues, the use of implantable loop recorder during follow up was able to better detect AF, perhaps leading to further interventions, like catheter-based ablations, that might have impacted on the main outcome. Despite these limitations, the study is interesting because it focuses on elderly patients who might be less likely to undergo this concomitant procedure.

At this point, someone may go even further, asking why not consider elderly patients for hybrid or stand-alone surgical AF ablation? Both techniques have shown promising results compared with percutaneous catheterization,[3] and why should we exclude elderly patients from the possibility of a longer and healthier life? The question remains, but we believe that the cardiac surgical community should focus on the treatment of AF more practically and stop considering it a minor problem that we can ignore.

References

1. Blackstone EH, Chang HL, Rajeswaran J, Parides MK, Ishwaran H, Li L, et al. Biatrial maze procedure versus pulmonary vein isolation for atrial fibrillation during mitral valve surgery: new analytical approaches and end points. *J Thorac Cardiovasc Surg*. 2019;157:234-43.
2. Petersen J, Vettorazzi E, Hakmi S, Alassar Y, Meyer C, Willems S, et al. Should concomitant surgical ablation for atrial fibrillation be performed in elderly patients? *J Thorac Cardiovasc Surg*. 2021;161:1816-23.e1.
3. Ad N, Damiano RJ, Badhwar V, Calkins H, La Meir M, Nitta T, et al. Expert consensus guidelines: Examining surgical ablation for atrial fibrillation. *J Thorac Cardiovasc Surg*. 2017;153:1330-54.