

# The surgical atrial fibrillation ablation with concomitant coronary artery bypass grafting on the testing grounds of cost and 1-year mortality

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*Comment on:* Rankin JS, Lerner DJ, Braid-Forbes MJ, *et al.* One-year mortality and costs associated with surgical ablation for atrial fibrillation concomitant to coronary artery bypass grafting. *Eur J Cardiothorac Surg* 2017. [Epub ahead of print].

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Surgical ablation (SA) for atrial fibrillation has been gaining prominence with evolution of better tools and techniques that are ultimately resulting in better success rates (1-3). SA and coronary artery bypass grafting (CABG) are considered as the gold standards in their respective domains for treatment of atrial fibrillation and multi vessel coronary artery disease. Currently, CABG remains the most commonly performed cardiac surgery and most SA are performed simultaneously with other cardiac procedures (4).

Rankin *et al.* in their recent publication titled “One-year mortality and costs associated with SA for atrial fibrillation concomitant to CABG” at *European Journal of Cardio-Thoracic* in February 2017 edition, define the risk adjusted clinical outcomes and cost for 3,745 Medicare beneficiaries with atrial fibrillation history who underwent CABG (5). The patient subpopulation was further divided into two groups of those with and without concomitant SA. The patients not having history of persistent atrial fibrillation were excluded in the study. Interestingly, intra-procedural mortality and post procedural complication rates were not significantly different between patients that underwent SA else otherwise, before and after the risk adjustment. Although the adjusted death risk was reduced by 50% after SA on comparing to the group without SA. The authors also noted “The preoperative characteristics favored patients with SA who had less chronic lung disease, renal failure, peripheral arterial disease, prior percutaneous coronary

intervention, heart failure in the 2 weeks prior to admission, emergent presentation, intra-aortic balloon pump use the day of or after CABG and had lower CHA2DS2-VASc scores, compared with patients without SA”.

Since the Medicare database does not have any procedural details, therefore not much of details were available about ablation energy source and lesion sets employed. Further, the group containing surgically ablated patients had risk adjusted CABG costs of admission which are nearly eleven percentage more than the other ones who did not receive same.

It definitely makes sense to perform dual procedures of SA and CABG together in a single setting. It's not only time saving but also minimal resource consuming. Our audience also needs to keep in mind that, since the information for the paper was collected from a claims database i.e., Medicare SAF which has its own pros and cons. Although, this database records the number, cost and duration of inpatient and outpatient hospital admission, definitely lacks the fine clinical details. Although, Rankin *et al.* after detailed statistical analyses of this dataset concluded that only late survival significantly increased, but not the early postoperative risk for patients for AF patients that underwent SA with CABG.

Definitely, above findings may promote concomitant SA and CABG for the needful at least on parameters of cost-effective strategy, however, such findings will need to go

through the fire test of different local regional datasets of world. On an interesting side, most of such breakthrough papers including this one by Rankin *et al.* regarding bipolar radiofrequency ablations for atrial fibrillation have been published by professionals who are either consultants to Atricure or have been funded by same firm (6,7).

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### Footnote

*Conflicts of Interest:* The author has no conflicts of interest to declare.

### References

1. Kumar N, Bonizzi P, Pison L, et al. Impact of hybrid procedure on P wave duration for atrial fibrillation ablation. *J Interv Card Electrophysiol* 2015;42:91-9.
2. Kumar N, Pison L, La Meir M, et al. Safety and Feasibility of Use of Contact Force Catheter during Hybrid Procedure for Atrial Fibrillation Ablation. *Innovations (Phila)* 2014;9:190-227.
3. Kumar N, Pison L, La Meir M, et al. Hybrid approach to atrial fibrillation ablation using bipolar radiofrequency devices epicardially and cryoballoon endocardially. *Interact Cardiovasc Thorac Surg* 2014;19:590-4.
4. Akpınar B, Sanisoglu I, Guden M, et al. Combined off-pump coronary artery bypass grafting surgery and ablative therapy for atrial fibrillation: early and mid-term results. *Ann Thorac Surg* 2006;81:1332-7.
5. Rankin JS, Lerner DJ, Braid-Forbes MJ, et al. One-year mortality and costs associated with surgical ablation for atrial fibrillation concomitant to coronary artery bypass grafting. *Eur J Cardiothorac Surg* 2017. [Epub ahead of print].
6. La Meir M, Gelsomino S, Lucà F, et al. Minimally invasive thoracoscopic hybrid treatment of lone atrial fibrillation: early results of monopolar versus bipolar radiofrequency source. *Interact Cardiovasc Thorac Surg* 2012;14:445-50.
7. Pison L, La Meir M, van Opstal J, et al. Hybrid thoracoscopic surgical and transvenous catheter ablation of atrial fibrillation. *J Am Coll Cardiol* 2012;60:54-61.

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