Commentary: It’s the surgeon, not the hospital volume

Philip Coffey, MD, and Richard Lee, MD, JD, MBA

This retrospective correlation analysis by Ad and colleagues investigates for associations between center volume, concomitant procedure, and percent of patients with atrial fibrillation (AF) who received surgical ablation (SA). The intent of the study is to inform the broader discussion regarding why so few patients in whom SA is indicated receive it. This is a worthwhile pursuit; however, the contribution of the study is limited by several key shortcomings.

There are 2 underlying core assumptions present in this study: first, that SA should be performed with the same frequency across hospitals, and second, that academic centers should have at least similar frequency of AF ablation as nonacademic centers. The first is supported by current literature and societal guidelines and is antecedent to this study. The second is the impetus for the investigation and is fundamentally flawed. There are too many confounding factors at play to draw meaningful correlations between center volume and the decision of an individual surgeon to perform a specific lesion set on a single patient with a particular combination of comorbidities receiving one of many possible concomitant procedures on a given day.

The study essentially asks the question “Does volume impact application of SA for AF?” The decision to perform SA is made on the surgeon level, not the hospital level, making the study question non-sequitur. As there are no surgeon-level data available, the question they intended to ask is not answerable by the study performed. This is not to say that there are no hospital-level factors that could influence that decision, but no information regarding any of those factors is presented either.

A recent study using the Society of Thoracic Surgeons (STS) database showed that institutional volume was not a predictor of outcomes beyond 200 cases per year in resternotomy coronary artery bypass grafting but that greater volume was associated with better outcomes at the surgeon level. A similar effect may be present here where, beyond a certain point, the surgeon’s experience dictates the decision-making process and outcomes rather than institutional factors. This will also be influenced by the individual state certificate of need and stringency of the requirements for a cardiac surgery program. In Maryland, if a center does not have a minimum of 200 cardiac cases a year, the number shown to obviate volume impact in the previous cited study, the program undergoes review and potential closure. These practices likely vary by state and, thus, make any findings of this study difficult to apply generally. Further, the patient profile may differ by center.

Academic centers are defined by the STS, which leads to wide variability in the actual practice environment in different centers all termed “academic.” In our personal experience, the patient population at the Medical College of Georgia is much sicker, on average, than that of Northwestern. The authors note that the patients who did not receive SA were older, more likely to be urgent cases, and had more comorbidities. It is possible that these patients cluster in certain “academic centers” that are known to disproportionately care for patients with limited access to health care. It is feasible in these settings that the surgeons were less inclined to think the benefit outweighed the risk. It is impossible to draw any conclusions based on these limited data, much less apply them to a larger, nationwide sample.
To their credit, the authors acknowledge lack of surgeon-level data as a limitation. The study may serve as a valuable template for a more in-depth one that uses all of the STS data. Until that is performed, it is challenging to draw any conclusions from this work. We look forward to the next attempt.

References