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# Commentary: Getting to the art of the matter with aortic valve repair

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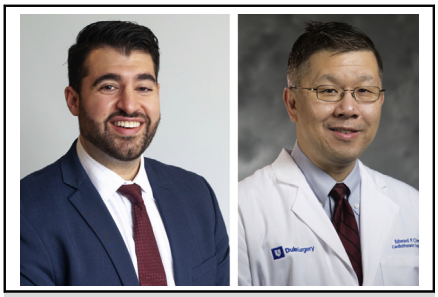

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**CENTRAL MESSAGE**

Repair of the regurgitant aortic valve is a difficult skill to attain, and "a one size fits all" approach is not an ideal strategy. Success in aortic valve repair can be mastered only though experience.

Surgical aortic valve replacement for aortic regurgitation using either a mechanical or bioprosthetic prosthesis is suboptimal due to the potential for structural degeneration and need for reoperation or the inherent risks of anticoagulation.[1] Aortic valve repair represents an attractive alternative that preserves native valve function. However, owing to alterations to aortic root geometry and the aortic cusps that may be needed to achieve valve competency, this procedure is complex. The specific components of the valve and root apparatus to target for intervention often can be difficult to determine.

Dr Svensson's[2] extensive experience and expertise with aortic valve repair is on full display in this issue of the *Journal*. In his article, he advocates that the commissures, leaflets, annulus, sinuses, and sinotubular junction represent a single entity that must be considered as one unit and discusses how to identify which components require intervention based on underlying pathology. The techniques described have been used by his group to achieve repair rates that are both successful and durable, with repair rates and 10-year freedom from operation exceeding 90%.[3,4]

He acknowledges that the results must be interpreted with caution, as the various techniques used have evolved over time. These results are comparable to what has been achieved by other groups in Europe and Canada.[5,6] There are some notable differences, however, in that Dr Svensson and colleagues identified severe preoperative aortic insufficiency as a risk factor for repair failure, whereas other groups did not.[7] In addition, Dr Svensson's group also found the best durability with a figure of eight suture, whereas other groups have expressed concern about the durability of this technique.[8]

Perhaps the most important take-away message of this article is that because of the technical complexity, aortic valve repair remains largely an "art."[9] Readers are given guiding principles of aortic valve repair instead of the usual technical pearls stressed by other authors, which include prescribing commissural angles, leaflet heights, and other measurements.[8] There is further emphasis that only through experience, observation, and trial and error can one gain the "sixth sense" that is required to successfully perform aortic valve repair. It is clear that Dr Svensson has developed this "sixth sense" and like a skilled artist is able to achieve masterful results.

We found this expert opinion to be educational and applaud Dr Svensson for his immense contributions to the field. However, for aortic valve repair to be disseminated beyond specialized centers, consistent and specific technical lessons are also needed. Only through a combination of technical expertise and application of surgical art will aortic valve repair ultimately be reproducible even by less experienced surgeons.

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Disclosures: The authors reported no conflicts of interest.
The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.
Received for publication Feb 16, 2021; revisions received Feb 16, 2021; accepted for publication Feb 22, 2021; available ahead of print Feb 27, 2021.

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JTCVS Techniques 2021;7:126-7
2666-2507



https://doi.org/10.1016/j.xjtc.2021.02.032

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