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Commentary: Redo of aortic root surgery: Tackling the nightmare successfully

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Brown and colleagues¹ investigate the outcome of reoperative aortic root replacement (ARR) in patients having undergone previous cardiac operations. They included all patients who underwent ARR (ie, aortic valve and aortic root) and divided them into the first sternotomy and redo sternotomy. Within the redo sternotomy population, they performed a subgroup analysis to look at the difference between the ARR in patients who were resternotomy for any other surgery and ARR redo of previous aortic root surgery. They found that redo ARR can be safely done with similar results to first-time ARR and previous sternotomy. In particular, mortality for such surgery reported by Brown and colleagues¹ is comparable to other studies, especially for the first-time ARR.^{2,3} The authors have to be congratulated for those brilliant results in such complex reoperative surgery. However, looking at the details of the numbers, some questions rise and remain unanswered. Among the significant findings of this study is that there is no difference in survival among redo ARR to redo-sternotomy to first ARR, with 12% mortality in both groups after propensity matching. This is a favorable result, but the lack of differences among the 2 matched groups is not due to the low redo ARR mortality, which is a remarkable achievement, but to the slightly higher mortality in redo first ARR than in other reports.^{2,3} We could not tease out the reasons for such incremental mortality after matching. Conceptually,

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CENTRAL MESSAGE

Performing aortic root replacement in patients with prior operation is a demanding surgery. But results are reassuring, and we should not be scared to replace a previously operated-on aortic root.

despite being a resternotomy, a first-time ARR should not have such a mortality rate considering that the aortic root was not previously replaced. A possible explanation may be the increment of endocarditis indication before and after matching. In particular, the percentage of infective endocarditis in the redo sternotomy first ARR rose from 39.7% before matching to 51.5% after matching and this is a well-known risk factor for mortality.²

Brown and colleagues'¹ results are excellent for such complex operations; it remains unexplained why they experienced such increased mortality. The take-home message is not to be afraid of such nightmare cases and perform redo ARR. Although we have to be aware of hidden risks and remember that center experience and surgeon ability are fundamental for a successful treatment.

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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 Oct 15, 2021; revisions received Oct 15, 2021; accepted for publication Oct 18, 2021.

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J Thorac Cardiovasc Surg 2021; ■:1

0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2021.10.024>

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