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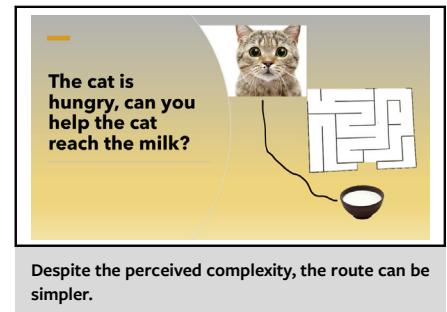


## Commentary: Sometimes there is a simpler route!

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Left ventricular assist device (LVAD) implantation is an established treatment modality for patients with terminal heart failure. Correct positioning of the outflow-graft is one of the key factors for determining the long-term outcome of patients.<sup>1</sup> Graft malposition can increase turbulence, effect pump performance, and increase subsequent risk of pump thrombosis or cerebrovascular complications.<sup>2,3</sup> The main site of outflow graft placement, the ascending aorta, has been widely studied.<sup>4</sup> Advancements in alternative implant strategies, combined with miniaturization of the technology, have broadened the strategy for outflow graft placement to major arteries such as the descending aorta, the innominate, the subclavian, or even the axillary artery.<sup>5-8</sup>

In this issue of the *Journal*, Tucker and colleagues<sup>9</sup> report the results of LVAD implantation with a novel alternative approach, the left axillary–right axillary arterial bypass (LARAAB) graft. In a minimally invasive setting, LARAAB was performed in a patient with a history of ischemic cardiomyopathy who underwent LVAD implantation for cardiogenic shock. The peculiarity of the described case lies in the fact that the previously placed outflow graft on the left axillary artery did not result in postoperative hemodynamic improvement whereas there was no notable anatomic obstruction. The patient required increasing vasopressor support caused by insufficient LVAD outflow and decision for reoperation was made. During reconstruction, the LVAD did not tolerate partial side clamping, and no



### CENTRAL MESSAGE

Left axillary–right axillary outflow tract grafting for left ventricular assist device implantation is feasible; simpler or more reproducible options should be considered for high-risk patients.

anastomotic reconstruction on the graft itself could have been made, and this variant, LARAAB, was performed. The Latin proverb *Aut viam inveniam aut faciam* (“I shall either find a way or make one”) appropriately describes the authors’ creative ability to tackle this case, and the authors further opt LARAAB to be a feasible treatment strategy in case of porcelain ascending aorta, unattainable descending aorta, and small calibre axillary artery.

Although this creative strategy can potentially be of additive value in the armamentarium of the cardiothoracic surgeon, several issues can arise, and we question the need for such an extension of a previously described strategy. When do we stop and plan a standard sternotomy intervention, refer the patient for greater-risk heart transplantation, or simply do not offer the LVAD intervention? What is the long-term outcome of such a strategy? If this technique is applicable in specific patients, how should we determine the right patient for this strategy? New complications will occur, especially with 2 grafts. In the postoperative low-output setting, how would we preoperatively adequately identify the culprit in case of LARAAB? Little is known about optimal placement, metric, rheology of flow, and appropriate dimensions of the graft for optimal postoperative hemodynamic results.

The availability of multiple alternative surgical techniques in the armamentarium of the surgeon requires careful tailoring to the need of the patient. While the presented

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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 Aug 22, 2020; revisions received Aug 22, 2020; accepted for publication Aug 26, 2020; available ahead of print Sept 15, 2020.

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JTCVS Techniques 2020;4:202-3

2666-2507

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<https://doi.org/10.1016/j.jtc.2020.08.062>

LARAAB intervention was performed with success, we caution our surgical community to start widely applying this technique and to look for other options. Sometimes there is a simpler route to help the cat get some milk.

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