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Commentary: Fashioning a replacement

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As the volume of cardiac surgery increases unabated, the number of reoperative procedures follows suit. The increasing incidence of end-stage cardiac disease is becoming increasingly matched by a growing occurrences of hostile mediastinum, concomitant histories of previous irradiation, and porcelain vasculature, each of which further precludes safe entry into the chest. As a result, there is growing interest in nonsternotomy options to provide indirect access to the left ventricle. These options include the supraceliac aorta, innominate artery, and the left axillary artery.¹ Tucker and colleagues² report the novel use of an extra-anatomic bypass to augment left ventricular assist device flow.² They fashioned an augmentation graft to improve axillary artery outflow with the use of a left axillary to right axillary arterial bypass graft.

The authors achieved this by siting the anastomosis on the left axillary artery, 5 cm distal to the left ventricular assist device outflow graft. They were immediately able to achieve flows >3 L/min with equivalent mean arterial pressure in both upper extremities and, by postoperative day 5, had weaned the patient off all inotropic and vasopressor support. The authors reported neither compromise in anastomotic integrity nor any kinking of the native artery and reported no limitation to flow through the ventricular assist device. Ultrasound interrogation of the graft anastomoses demonstrated no overt stenosis with free passage



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CENTRAL MESSAGE

Extra-anatomic graft to augment flow.

through the intercostal space. The authors thus offer a new and fresh look at flow augmentation with options for extra-anatomic conduits. This interest and the further development of alternative access will undoubtedly fuel demand for the evaluation of comparative outcomes to measure 1 access against another. Should these results, albeit short-term, be the harbinger of what the future holds, then transsternal access could theoretically become an alternative access itself.

References

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