Piggyback proximal anastomoses provide independent flow to target myocardium

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Occasionally, someone proposes a technique so simple and obvious, I am tempted to thump my forehead and ask, “Why didn’t I think of that?” In describing a piggyback technique for proximal anastomosis using the heartstring device, Dr Yanagawa and colleagues¹ create just such a moment. Although they are not the only surgeons to envision this technique,² they present an elegant argument for its benefits: the ability to perform a proximal anastomosis using a small conduit without flattening the inflow, improved cost effectiveness with 2-for-1 device use, and clear demonstration of consistent blood flow to all vascular beds involved. The demonstration of consistent blood flow is what provides the most convincing argument for this technique.

Use of the heartstring device to minimize aortic manipulation has been suggested to reduce stroke risk, but agreement is lacking in the literature on this subject.^{3,4} Given this lack, neither the authors of this article¹ nor I would propose the piggyback technique with the objective of stroke reduction.

However, I would propose that this method additionally may be very useful in the challenge of managing the short or heavily diseased aorta during on-pump cases.

The data presented¹ give good evidence that both of the distal coronary beds receive independent flow with this technique. Providing inflow to 2 grafts with limited aortic manipulation seems advantageous, compared with seeking alternative proximal sites, such as the innominate or carotid arteries. Similarly, placing a small free arterial conduit, radial or right internal thoracic artery, as a piggyback on a vein graft reduces the risk of compromising the left internal thoracic artery inflow by creating y-grafts from this most important conduit.

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Disclosures: Author has nothing to disclose with regard to commercial support.

Received for publication May 29, 2015; accepted for publication June 3, 2015; available ahead of print July 3, 2015.

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J Thorac Cardiovasc Surg 2015;150:728

0022-5223/\$36.00

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<http://dx.doi.org/10.1016/j.jtcvs.2015.06.010>