



Editorial



Editorial on He, G.-W. Which Is Better? Pedicled Versus Skeletonized Internal Mammary Artery Grafts in Coronary Artery Bypass Grafting: Emphasis on the Antispastic Role of Perivascular Adipose. *iCirculation* 2026, 1, 4

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Dr. He has provided a wonderful review of the two methods of IMA procurement and their positives and negatives. He is likely the world's foremost authority on the mediators and inhibitors of vasospasm in this graft so important to cardiac surgery and our patients. Besides birth and death, "the most important day in one's life is the successful anastomosis of the IMA to the LAD" according to my colleague Dr. Scott Johnson.

We have found over the course of our careers IMA procurement does not always lend itself to one technique or the other. There have been many times when setting out to skeletonize an IMA, it has been found better procured as a pedicle due to the quite intimate relation of the venous plexus surrounding it. Similarly, when approaching one with the plan to use a pedicle graft, the IMA seems to almost fall out of the thoracic cavity in a skeletonized manner and trying to preserve the surrounding plexus and perivascular tissue including fat and fascia would have seemed wrong.

This report clearly shows the benefits of taking down an IMA in a pedicled fashion. The observations made about the perivascular fat are compelling. There have been other recent reviews which reinforce the notion that pedicled grafts are protected by better NO production and thus less prone to vasospasm [1].

In prior reports, Dr. He has shown the most distal portions of the harvested IMA are the area most prone to vasospasm and should be avoided [2]. He points out the known differences (albeit truly small) in sternal wound healing between the two procurement techniques. One must wonder if not all pedicled graft procurements confer that decrease in wound healing. Not infrequently, a skeletonized IMA will have been created by taking a large amount of endothoracic fascia, fat, muscle and venous plexus first. Similarly, the pedicle size taken is not uniformly delineated. Some surgeons take an extremely generous pedicle, and others take a much more minimal one.

From a clinical perspective, vasospasm is also mediated by the vasoactive agent dosing used, the quality of myocardium, cardiac output and runoff as well as the degree of technical perfection in the anastomosis itself. Overlaying all the above factors are the quality of the IMA itself (diameter, any atherosclerosis, thermal injury, etc.) and its careful, meticulous harvest preparation (including discarding the excess distal length) and connection

Since many confounding variables occur in the conduct of a coronary bypass revascularization, it is very difficult to tease out which are most important. Despite all these complexities, Dr. He's paper adds strength to the notion a pedicled graft adds benefit to the procedure.

To this day, the best IMA to LAD connection is one done technically masterfully after years of practice and with consideration of all related anatomic and physiologic concerns.



Conflicts of Interest

The authors have no conflict of interest.

Use of AI and AI-Assisted Technologies

No AI tools were utilized for this paper.

References

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2. He, G.W. Contractility of the human internal mammary artery at the distal section increases toward the end. Emphasis on not using the end of the internal mammary artery for grafting. *J. Thorac. Cardiovasc. Surg.* **1993**, *106*, 406–411. [https://doi.org/10.1016/S0022-5223\(19\)34072-3](https://doi.org/10.1016/S0022-5223(19)34072-3).