Authors have nothing to disclose with regard to commercial support.

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to all medical oozing caused by prolonged cardiopulmonary bypass, systemic deep hypothermia, or aortic dissection associated consumption coagulopathy.

Despite improved surgical outcomes of aTAAD and shift of focus to managing malperfusion and late aortic remodeling nowadays, saving the patient's life remains the primary goal in managing this potentially fatal disease. Depending on the surgeon's experiences, every effort to eliminate bleeding complications after surgical repair of aTAAD should be encouraged, including the Cabrol fistula and its modifications and alternatives.²⁻⁵ Although there were no short-term complications associated with the modified Cabrol fistula in this study, reports on the long-term adverse events, if any, would be informative, especially infections due to foreign materials and compressive effects of the residual hematoma.

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REPLY: DISSECTING THE WRAPPING ISSUE

Reply to the Editor:

In their letter to the Editor, Lin and colleagues¹ correctly argue that the use of the Cabrol fistula in all aortic reconstructions not only is not necessary but may prove complicated and dangerous. Extended aortic reconstructions involving the arch, especially if using trifurcated or quadrifurcated grafts would be especially difficult to reconstruct a fistula. Closure of the spaces between the individual arms of the grafts and the superior thoracic inlet spaces would be a complex and time-consuming effort, and, as is pointedly discussed in the letter, may require extensive dissection and mobilization, if not transection, of the innominate vein to facilitate construction. Although these manipulations might be problematic, the majority of significant, difficult-to-reach bleeding typically arises from the periroot segment of the aorta, especially the left coronary button. As is again correctly discussed, the need for reflecting and repositioning various remnants of residual aorta would put excessive strain on delicate tissues already traumatized by suture, potentially creating a catastrophic result. Further, current technique and comfort with aortic reconstructive measures have resulted in, even at low-volume centers, acceptable results that are not plagued with significant bleeding issues, again obviating the need for extensive shunting procedures.

Fundamentally, as iterated, protecting the patient's life is of foremost concern in all procedures, and the use of the Cabrol fistula has undoubtedly salvaged many aortic repairs. The need for the application of this technique to all patients, however, Lin and colleagues¹ correctly argue, may be overwrought if meticulous technique and careful attention to detail are applied throughout the reconstructive process.

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REPLY FROM THE AUTHORS: RESPONSE TO THE QUESTION OF EXTENDED DISSECTION RENDERING MODIFIED

CABROL FISTULA IMPOSSIBLE

Reply to the Editor:

We thank Dr Lin and colleagues¹ for their interest in our article.²

We agree with them that better exposure of the arch branches provided by extended dissection is the principle in the arch repair of acute type A aortic dissection. Surely, good exposure not only provides more meticulous anastomose but also facilitates the subsequent hemostasis. However, Dr Lin and colleagues¹ believed that this extended dissection would make our modified Cabrol fistula impossible. In our practice with arch repair of acute type A aortic dissection, we never found the extended dissection might make our modified Cabrol fistula technique impossible. In this setting, another small bovine patch was used to cover the cranial part of the mediastinum, with its bottom sutured to the cranial side of the innominate vein.

During the repair of acute aortic dissection, a meticulous anastomotic technique is certainly the most important tool

to prevent bleeding. Direct surgical methods should be used if bleeding is spurting, and only oozing could be managed by our technique. The primary purpose of our modified Cabrol fistula was to control the intractable bleeding. The clinical results of our application of the modified Cabrol fistula showed that it provides primary and definite sternal closure, avoids the detrimental effects of a second pump run and continued bleeding, and consequently improves the early outcome. Enlightened by this satisfactory result, we routinely apply the modified Cabrol fistula in surgical repair of acute aortic dissection for the purpose of better early outcome. Fortunately, our results are encouraging and demonstrate routine application of our modified Cabrol fistula will improve the early outcome of surgical repair of acute dissection.²

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