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ADULT

Commentary: Hemiarch replacement for acute type A dissection: Are we doing enough?

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CENTRAL MESSAGE

Perioperative outcomes of hemiarch replacement for type A dissection without cerebral malperfusion are comparable for patients either with or without arch branch vessel dissection.

In the present issue of the *Journal*, the Michigan group questions if a hemiarch replacement is adequate in patients with type A dissection with arch branch vessel dissection (ABVD) in the absence of cerebral malperfusion.[1] The retrospective study extending on a 10-year period compared 133 patients with ABVD and 143 patients without ABVD. Noteworthy is the exclusion of 168 patients with extended arch-replacement procedures performed in the presence of an arch diameter >4 cm, extensive intimal arch tear, or ABVD with cerebral malperfusion. The present trial demonstrates comparable perioperative outcomes in terms of stroke and mortality in patients with or without ABVD. Late reoperations for arch/thoracoabdominal aneurysmal degeneration were increased in the ABVD group, although they did not reach the level of significance when limiting the analysis to patients with type I DeBakey aortic dissection. The authors concluded that hemiarch replacement is an adequate procedure for patients with type A aortic dissection with or without ABVD and that extended arch resection could potentially decrease late reoperations in a subset of patients with ABVD.

While the main goal with type A aortic dissection is still to save the patient's life by preventing aortic rupture/tamponade, improvement in cerebral-protection strategies, operative techniques, and perioperative management have lessened risks of elective extended arch procedures, raising the possibility to implement these operations in patients with type A dissection to decrease late reoperation and increase survival. Among specialized aortic centers, total arch replacement procedures in acute type A dissection have shown similar perioperative outcomes to a standard hemiarch resection.[2,3] Furthermore, distal aortic remodeling with thrombosis of the false lumen may decrease late aneurysmal degeneration. Although rate of false lumen thrombosis may be further enhanced with novel hybrid grafts, risk of paraplegia is present, a dreadful complication exceedingly rare during a standard hemiarch repair. While it is generally accepted that total arch replacement should be considered in presence of a dilated arch or with extensive arch tears, controversy remains to which other subgroup of patients may benefit from extended arch repairs in a type A dissection. Although nonrandomized studies may conclude similar outcomes between total arch replacement and hemiarch procedures, clinicians oftentimes weight many variables in the decision-making process in selecting the type of operation in an acute type A setting. Hemodynamic status, aortic size, patient comorbidities/age, presence of malperfusion or aortopathy, and surgeon expertise influence the choice of procedure and early- and long-term outcomes of type A dissection repair. Hence, owing to possible late benefits, a young hemodynamically stable patient without malperfusion may be offered a more extended repair in expert hands whereas an elderly patient in shock

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will undergo a life-saving hemiarch procedure. The present manuscript supports that a standard hemiarch replacement procedure in an acute type A dissection with or without ABVD in the absence of cerebral malperfusion is a safe and reliable procedure and should be considered as the gold standard approach, albeit the presence of ABVD may portend a greater risk of late aneurysmal degeneration. Further studies are required to better stratify which patients are at increased risk of late reoperation or aortic mortality after a standard hemiarch procedure. Thereafter, tailoring the ideal type of extended arch procedure to the clinical setting will have to be thoroughly evaluated. The Michigan group has to be congratulated for shedding more light on the complex field of management of type A dissection.

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