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Commentary: Acute type B aortic dissection: Navigating new horizons

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Acute type B aortic dissection is a challenging acute aortic syndrome in which thoracic endovascular aortic repair (TEVAR) is indicated for such complications as rupture and malperfusion.^{1,2} The role of TEVAR in this setting remains controversial when classic complications are absent.¹⁻⁴ The adverse natural history of uncomplicated acute type B dissection has recently prompted selective consideration of TEVAR to supplement best medical therapy.^{3,4}

The report by Hong and colleagues⁵ in this issue of the *Journal* evaluates the rationale for TEVAR in uncomplicated type B aortic dissection. The authors highlight the advances in classification, emergence of high-risk features, and current management options and also suggest extended indications for TEVAR based on the presence of high-risk features.^{5,6}

How might their report stratify our management approach to type B aortic dissection? First, uncomplicated presentations are now defined by an absence of high-risk features, malperfusion, or rupture.⁵⁻⁷ These patients require intense medical therapy, including titrated analgesia, strict blood pressure control, and close monitoring for disease progression.^{5,6} This medical management can often be successful through the hyperacute (the first 24 hours of symptoms), acute (1-14 days from symptom onset), and subacute (15-90 days from symptom onset) phases of care. If a systolic blood pressure >120 mm Hg is required to support vital organ perfusion, then TEVAR is likely required.^{5,6}

Second, high-risk presentations are now defined by clinical and radiographic criteria.⁵⁻⁷ The high-risk clinical criteria

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CENTRAL MESSAGE

Type B aortic dissection may present in an uncomplicated, high-risk, or complicated fashion. High-risk presentations may benefit from endovascular therapy as a supplement to best medical therapy.

include severe pain, refractory hypertension, and readmission. The high-risk radiographic criteria include bloody pleural effusion, aortic diameter >40 mm, false lumen diameter >22 mm, an entry tear on the lesser curve, and radiographic malperfusion.⁵⁻⁷ In patients with high-risk presentations, the suggested management includes intense medical therapy supplemented by TEVAR, ideally late in the acute phase or early in the subacute phase.^{5,6} The timing of TEVAR in high-risk presentations is also influenced by clinical urgency, as thoughtfully outlined by Hong and colleagues. Because the risk of complications from TEVAR in acute type B dissection is lower after the hyperacute and early acute phases, delayed timing for TEVAR has been preferred when clinically feasible.^{5,6,8,9} In the setting of classic complications such as rupture and malperfusion, emergent TEVAR is indicated.⁵⁻⁷

So where do we go from here? The classification of risk in acute type B dissection has evolved to yield 3 clinical cohorts: uncomplicated, high-risk, and complicated. Hong and colleagues also review important adjuncts for the team-based perioperative management of these clinical presentations. These adjuncts include intravascular ultrasonography to guide interventions for static and dynamic malperfusion, as well as an integrated approach to spinal cord rescue with deliberate systemic hypertension and cerebrospinal fluid drainage to augment spinal cord perfusion pressure.^{5,6}

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In conclusion, Hong and colleagues are to be congratulated for highlighting the evolution of the clinical approach to acute type B aortic dissection.^{10,11} It is likely that clinical trials and regional aortic centers will continue to evolve in concert with advances in imaging and interventions to further improve outcomes for our patients.^{12,13}

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Commentary: Modern management of type B aortic dissection: Perspectives from the house of DeBaakey

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In their article in this issue of the *Journal*, Preventza and colleagues¹ provide an overview of the current state of treatment of type B aortic dissection (TBAD), highlighting the paradigm shifts that have taken place, as well as some of the newer treatment options currently under investigation.

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CENTRAL MESSAGE

Although medical management continues to provide outstanding outcomes in the majority of patients with acute type B aortic dissection, the high incidence of late aortic-related complications has increased interest in preventing these events through earlier intervention.