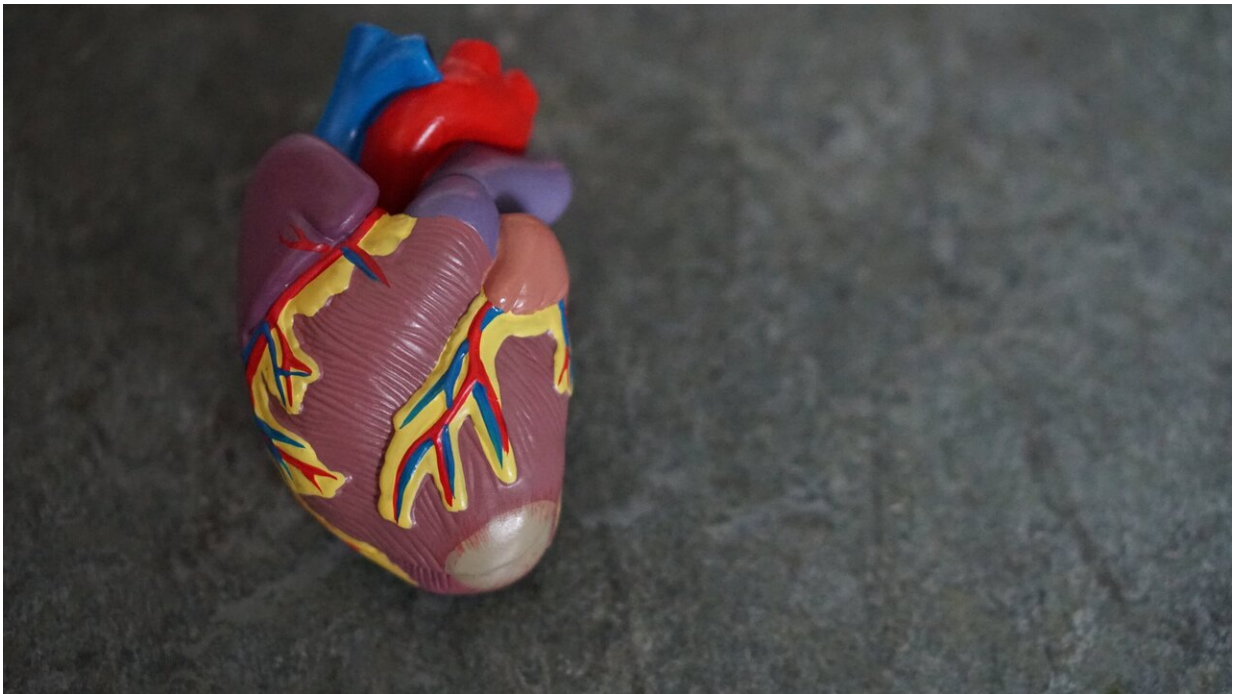


New practice guideline addresses diagnosis, treatment of type B aortic dissection

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The Society of Thoracic Surgeons (STS) and the American Association for Thoracic Surgery (AATS) released a new clinical practice guideline that includes major recommendations for managing patients with type B aortic dissection (TBAD). The guideline was published online today in *The Annals of Thoracic Surgery* and *The Journal of Thoracic and Cardiovascular Surgery*.

"There has been an explosion of information in the form of research reports of varying quality regarding the [treatment](#) of type B dissection over the past decade," said author G. Chad Hughes, MD, from Duke University Medical Center in Durham, North Carolina. "This guideline is unique in providing surgeons with a comprehensive, up-to-date summary of the state of the evidence, while also serving as 'guard rails' that outline treatment options and [best practices](#) in certain scenarios. This is a first for any document in the field of type B dissection management."

The new clinical practice guideline offers evidence-based recommendations that include employing a "stepwise approach" to the evaluation and treatment of patients with uncomplicated (not immediately life-threatening) TBAD, followed by close clinical surveillance.

Aortic dissection is a serious condition and may be fatal, if not treated early. The aorta is the body's main and largest artery, transporting oxygen-rich blood from the heart to all the organs and other parts of the body. A dissection of the aorta occurs when a tear develops within its wall. The wall consists of three layers and this tear allows blood to flow in between the middle and outer layers, causing them to separate (dissect). "Type B" describes the location of the tear. In a type B dissection, the tear originates in the lower (descending) part of the aorta in the chest and may extend into the abdomen.

According to the guideline (and historically), aggressive medical therapy is the first step and considered the gold standard for managing patients with uncomplicated TBAD, while [open surgery](#) should be reserved for complicated (life-threatening) cases. Over the past decade, though, the treatment technology and techniques for TBAD have evolved rapidly, particularly in terms of less invasive treatment options for the disease.

In fact, one of the most significant standouts in the guideline is the new

role of earlier endovascular treatment such as thoracic endovascular aortic repair (TEVAR) in patients with uncomplicated TBAD, explained author Dawn S. Hui, MD, from The University of Texas Health Science Center at San Antonio.

In the early phase of treatment, surgery previously was reserved for patients who had complicated TBAD; in later phases, for patients who had progression of their disease, said Dr. Hui. Now, surgeons may be able to identify subsets of patients with uncomplicated TBAD who have a higher risk of progressive disease and treat them earlier with TEVAR—before progression develops. However, this recommendation remains secondary to medical management, and patient selection still needs to be better defined in the future.

For complicated TBAD patients, TEVAR or open surgery, depending on the anatomy, should be the first- line treatment, according to the guideline. The collective data demonstrated improved outcomes with TEVAR for these patients compared to open surgery or medical therapy alone.

The guideline also states that for some TBAD patients (ie, those with connective tissue disorders or chronic TBAD) whose disease has progressed despite medical therapy, a "more durable" open surgical repair may be recommended over TEVAR.

"We expect this guideline to improve the quality of care of patients with TBAD by providing surgeons the most up-to-date summary of when and how to effectively use which therapies, whether open surgery, endovascular therapy, or a combination of the two over the lifetime of the patient," said Dr. Hui.

STS believes that the practice of summarizing current scientific evidence into clinical practice guidelines and recommendations may contribute to

improving surgical outcomes, as well as the quality of patient care. In this case, to identify relevant evidence, a systematic review was outlined and an extensive literature search was conducted by a guideline steering committee. The group then wrote and developed recommendations based on a comprehensive and methodical appraisal of 50 highly cited articles that were included in the final review.

"In contrast to individual studies, clinical practice guidelines are unique because they are a high-quality summary and synthesis of what is already known about this topic," said Dr. Hui. "Guidelines are written according to a scientifically rigorous process. Thus, they can help resolve conflicting findings of different studies or define what treatment options are best for specific circumstances."

Importantly, Dr. Hughes said that with these new guidelines, the writing group was able to see the evidence summarized in a manner that "reinforced how little we actually know about the best way to treat these patients." More high-quality studies—namely randomized-controlled trials—are needed, he explained. These are studies where patients are randomly assigned to one treatment or another and then followed over time to determine which treatment is best for the patient in the long run.

"As a surgical community, we have been saying this for a decade, but now the time has come to finally get it done," said Dr. Hughes, who shared that the plan is to update the TBAD guideline within the next 5 years to reflect the strengthening scientific evidence.

Dr. Hui explained that while there remain gaps in knowledge and further studies certainly are needed, the role and timing of certain therapies now are better defined with this guideline.

More information: Thomas E. MacGillivray et al, The Society of Thoracic Surgeons/American Association for Thoracic Surgery Clinical

Practice Guidelines on the Management of Type B Aortic Dissection,
The Annals of Thoracic Surgery (2022). [DOI:
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