Type A Aortic Dissection Calls for Experience

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SNOWMASS, COLO. — Widespread physician awareness that type A aortic dissection carries a steep mortality of roughly 1% per hour from the time of symptom onset has paradoxically hindered patient management, Dr. Andrew S. Wechsler said at a conference sponsored by the Society for Cardiovascular Angiography and Interventions.

"The sense of urgency associated with ascending aortic dissections frequently results in patients being treated by local surgeons at centers that are not experienced in the management of acute aortic dissections. I believe that the 1%-2% loss rate per hour is paid back many-fold by a 1- or 2-hour delay for emergent referral to experienced centers. Mortality will ultimately be much less for the patient years from the surgery," argued Dr. Wechsler, professor and chair of cardiothoracic surgery at Hahnemann University Hospital, Philadelphia.

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That's because optimal surgical management of type A aortic dissection often requires highly complex intraoperative decision making that is too complex for surgeons lacking extensive experience in these situations. The average surgeon tends to focus on immediate patient survival without considering other issues that have a big impact on the late complication rate.

"This is what every surgeon would love to do in treating an ascending aortic dissection: They would treat a limited tear in the proximal ascending aorta above the aortic valve that ended above the brachiocephalic vessels. The operation involved is the simple insertion of a supraannular interposition graft, probably with cross-clamping of the aorta. The desire to do this operation—and its low mortality—is so great that it frequently overrides the need to do a more complex operation which would result in a much better long-term outcome for the patient," he explained.

Among the key issues that ought to be addressed—but frequently aren't—are how best to manage the distal aorta. Would a technically challenging hemiarch replacement or an even more daunting complete arch replacement yield better long-term results than a simple interposition graft? And what about the aortic valve—replace it, resuspend it, or replace the aortic root?

The most basic aspect of surgical treatment for aortic dissection is removal of the portion of the aorta containing the intimal tear. Beyond that, however, the other fundamental goals of these operations are as poorly understood by most surgeons as by nonsurgeons, according to Dr. Wechsler, editor of the Journal of Thoracic and Cardiovascular Surgery.

Type A aortic dissection should be thought of as more than an acute event. Late complications of surgery include redissection, formation and expansion of an aneurysm, aortic insufficiency, and organ ischemia. There is a high long-term complication rate at most cardiac-surgery centers, and the reoperative mortality rate is typically 20% or more. In contrast, the complication rate at highly experienced centers is far less, and reoperative mortalities in such centers are in the range of 4%, he continued.

The International Registry of Aortic Dissection (IRAD) has provided "incredibly valuable information" on both the natural history of aortic dissection and the surgical impact, he said.

At IRAD centers—not all of which have vast experience—perioperative mortality in type A aortic dissections is 27%. In contrast, the surgical literature is replete with single-institution series reporting mortality rates of around 13%.

"Why do those results differ so much from those in the real-world experience as reflected in IRAD? The answer is that people who get lousy results with aortic dissection don't report them. The numbers you see in the literature are the best that can be found. Real-world results for type A dissection are far worse than reported, and far worse than most people believe them to be," Dr. Wechsler stressed. ■