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Commentary: Aortic root aneurysm and coarctation—choose a strong horsehair and stay off the autopsy table

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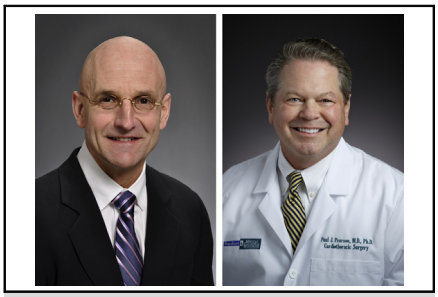

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CENTRAL MESSAGE

There are different strategies to treat aortic coarctation and concomitant life-threatening proximal aortic disease, with the common immediate goal of saving the patient's life.

Quoting from Abbot's classic 1928 autopsy series on coarctation of the aorta, "In the second place (as is manifest from the preceding list) the presence of a bicuspid aortic valve appears to indicate, at least in a portion of the cases in which it occurs, a tendency to spontaneous rupture of the aorta, which hangs always, like a Sword of Damocles, above the unsuspecting subjects of the this type of coarctation…That such a thinned area would yield the more readily to form a dissecting aneurysm, with later rupture under the increased pressure that exists in the upper part of the body in adult coarctation, would appear to be self-evident."[1] We owe thanks to our primary care physicians and cardiologists that we very rarely encounter a patient with palpable collaterals on the back or the abdominal wall, nor do we frequently encounter the type of patient presented by Mihalj and colleagues,[2] with severe coarctation and contained rupture of an aortic root aneurysm. We congratulate these authors for their thoughtful and successful management of this very challenging case. Based on the supplementary figure and the time stamp, it appears that our colleagues in Bern share our experience of getting the big emergency case after 6 p.m.

Formulating a strategy for cases with either rupture or proximal dissection requires an honest accounting of the institution's and the surgical team's experience and capability. The first priority is managing the contained rupture (or dissection) and aortic insufficiency and saving the patient's life. A valve-sparing approach is certainly acceptable in selected contexts, but an expedient root replacement with a commercially available valve is rarely if ever wrong. Authors have reported various strategies for the coarctation: (1) staged to a later open or interventional approach; or during the same anesthetic, using (2) an open antegrade or retrograde stent graft; (3) an interposition graft; or (4) an extra-anatomic bypass graft.[3-8] The remaining fundamental issue is the conduct of cardiopulmonary bypass. We intend no criticism of the authors, but we are more inclined to use dual perfusion from above and below in all cases and would advise our more junior colleagues to do likewise. It is fundamentally sound and ensures the perfusion field is covered in the event of some catastrophe.

The tale of the Sword of Damocles was actually a moral parable. After the courtier was granted his request and allowed to sit on the king's chair and receive all the honorable treatment due a king, he looked up and noticed hanging above the throne a gleaming sword held by a single horsehair. He then realized that the grass may have been sufficiently green in his previous position. The king analogy doesn't hold (we're in the service industry), but we chose our profession knowing the spectrum of complexity we might

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encounter. When a difficult reality occurs, we have to deal with it, but that doesn't mean we can't hope for a strong horsehair.

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