yet, inadequate employment of SCR is likely at their origin and would deserve additional insights.

In summary, the current work has the merit to stimulate reflection and help surgeons facing type A aortic dissection to discriminate cases in which the best is actually the true friend of the good.

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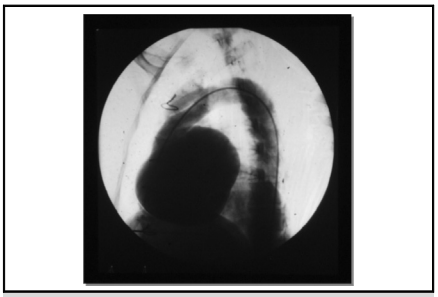
Commentary: Acute type A dissection—Should we systematically replace the aortic root?

Jean Bachet, MD, FEBCTS



A dissected root was not replaced during initial surgery. Its evolution, 5 years later!

CENTRAL MESSAGE

The main aim of surgery of acute type A dissection is to save the patient's life. Yet, a second aim is to prevent late severe aortic adverse events. Could then replacing the aortic root be mandatory?

In their article in this issue of the *Journal*, "The Fate of Aortic Root and Aortic Regurgitation After Supracoronary Ascending Aortic Replacement for Acute Type A Aortic Dissection," Ikeno and coworkers[1] analyze the evolution of the aortic root and the rates of reoperations or adverse events in this aortic segment in a large cohort of patients operated on during a 20-year period. Their report is based on a large cohort of patients, and the immediate as well as long-term results can be estimated as satisfactory (in-hospital mortality, 13%; late survivals, 87% at 5 years and 65% at 10 years). The rates of absence of adverse events in the aortic root were 75% at 5 years and 57% at 10 years. These results seem acceptable. Nevertheless, they mean that among the patients surviving surgery, a quarter at 5 years and almost half at 10 years had died or needed to be reoperated on because of an adverse event in the aortic root.

This raises a major and still unresolved question in the great majority of patients. When should the aortic root be replaced?

This question has been resolved for all patients with any connective tissue disease, in particular Marfan syndrome. For those patients, it is now, without any question, largely demonstrated that the aortic root should be systematically replaced, whatever its condition and dilatation.[2,3] In this matter, the increasing use of valve sparing procedures is indeed a major progress.

But for the rest of the patients?

On the basis of their study, Ikeno and coworkers[1] conclude that the initial diameter of the Valsalva sinuses, the number of cusps detached and the use of gelatin-resorcinol-formalin glue were independent factors of late aortic root adverse events. This is not really surprising.

The diameter of the Valsalva sinuses is certainly an important determinant if we consider that according to the Laplace law the importance of the wall stress increases with the diameter. Late dilatation, false aneurysm, or even rupture can, however, be observed in patients with a root that is normal or only slightly dilated preoperatively. Indeed, when the aortic root is kept either untouched or just repaired, the wall stress is also linked postoperatively to the thickness or fragility of the Valsalva wall, the ignored

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persistence or recurrence of a late localized dissection, and any evolving aortic valve regurgitation.

Similar comments could be applied to the problem of detached valvular cusps. Their reimplantation may be technically difficult and anatomically somewhat imperfect. The physiologic coaptation may be missing, and some regurgitation increasing with time may then be observed, necessitating some late valve or total root replacement.

Commenting on the responsibility of gelatin-resorcinol-formalin glue in the occurrence of late impairment of the root repair seems irrelevant now, because this adjunct seems to have currently totally disappeared from the surgical armamentarium.

Anyway, despite their excellent statistical analysis, Ikeno and coworkers[1] leave the readership somewhat disappointed. They do not clearly define the threshold beyond which a systematic replacement of the root is indicated, and they do not exactly define which patients and which type of initial procedure would allow reductions in the rates of adverse events and reoperations on the aortic root.

If we analyze the evolution of emergency surgery for acute type A dissection during the last 3 decades, we may observe an increasing tendency toward replacing more and more frequently the distal segments of the aorta (hemiarch, total arch, and proximal thoracic aorta with the use of the frozen elephant trunk technique). Therefore, applying a similar strategy to the proximal aorta, would it be quite irrelevant or undue to suggest that, except for the few patients in whom the aortic root and valve are absolutely spared by the pathologic process, the aortic root should be systematically replaced through the performance of a valve-sparing or bio-Bentall procedure?

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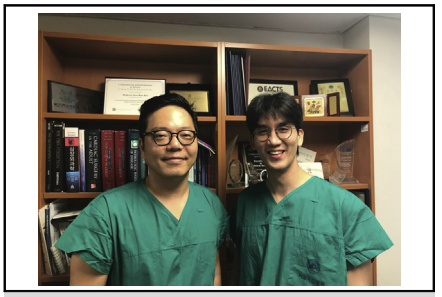
Check for updates

Commentary: Balancing the extent, balancing the risk

Sung Jun Park, MD, and Joon Bum Kim, MD, PhD



Joon Bum Kim, MD, PhD (*left*), and Sung Jun Park, MD (*right*)

Acute type A aortic dissection (ATAAD) remains a surgical challenge associated with very high operative mortality (18.4%) even in contemporary cohort studies.[1] With regard to the management of the aortic root in ATAAD in particular, conservative supracoronary aortic replacement (SCR) may effectively treat the proximal aorta in the majority of patients, whereas extensive aortic root replacement

CENTRAL MESSAGE

While root-preserving aortic replacement remains mainstay of treatment in acute aortic dissection, risk can be well balanced by fine patient selection for aggressive root approach.

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