This database continues to yield immensely important information on the outcomes following cardiovascular surgical procedures for virtually the entire population of Japan, as well as information that will be of value to other nations that are striving to improve outcomes following the treatment of acute type A aortic dissection and other major vascular and cardiac surgical procedures.

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Commentary: Type A dissection repairs made in Japan

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Okita and colleagues¹ report a very large, contemporary (2013 to 2018) experience drawing from 29,486 surgical cases of acute type A aortic dissection (AAD) registered in the Japan Cardiovascular Database. Reporting all cases to the national database is mandatory in Japan, so the data are a representative acute cohort.

There is valuable information in this article. Although frequently the subject of research, the aortic arch was replaced in only 20.6% of AAD cases, with an additional 8.7% undergoing a concomitant frozen elephant trunk (FET) procedure. Outcomes were similar whether the extent of resection included zones 0 to I, 0 to III, or 0 to

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CENTRAL MESSAGE

Excellent, well-documented, contemporary outcomes on acute type A aortic dissection from the Japan Cardiovascular Database.

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III + FET, with respect to hospital mortality (10.8%, 11.9%, and 10.8%, respectively), stroke (11.5%, 11.9%, and 11.5%, respectively), and prolonged ventilation (15.1%, 15.6%, 16.0%, respectively). However, the incidence of spinal cord injury (SCI) was 3.3%, 4.4%, and 6.5%, respectively. Presumably, these are de novo, postoperative SCI complications because preoperative SCI is not noted. These data are notable at both ends of the resection spectrum. Despite a number of centers reporting very low

rates of spinal injury associated with the FET, this large, contemporary experience indicates that it remains a worrisome complication. On the less-aggressive side, the report of 3.3% SCI for zone 0 to I resections, presumably mostly hemiarch procedures, is highly unusual. There is no a priori reason that SCI cannot occur following a hemiarch for AAD, but in our experience, spanning more than 35 years, and an unofficial poll of other large institution experiences, the incidence of de novo postoperative SCI following a hemiarch procedure for AAD is 1 in 1000.

The mortality rates were outstanding, with 11% in-hospital mortality—10.1% in the most recent cohort—consistent with contemporary outcomes in centers of excellence. Presumably, some institutions in Japan have fewer cases and less experience than centers of excellence in Japan, yet these nationwide mortality rates are considerably lower than the 17% operative mortality recently reported for acute type A dissection in the Society of

Thoracic Surgeons Adult Cardiac Surgery Database.² One might wonder whether some extreme risk cases are excluded, but examining the preoperative risks indicates that difficult cases are included because 94% underwent surgery within 24 hours, 12% had cardiogenic shock, 3.3% underwent cardiopulmonary resuscitation within 1 hour of surgery, and 20% were older than age 75 years. Clearly, like The International Registry of Acute Aortic Dissections, the Scandinavian and Canadian databases, the Japan Cardiovascular Database database will prove a valuable source of information for our specialty.

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