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Commentary: Recurrent xenopericardial elephant trunk graft infection: Snatching victory from the jaws of defeat

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CENTRAL MESSAGE

Large vegetation of a xenopericardial elephant trunk graft is an unusual cause of aortic obstruction.

In this edition of the *Journal*, Minegishi and colleagues¹ present a patient who underwent total arch replacement with elephant trunk for type A dissection. She developed an *Enterobacter cloacae* graft infection and underwent redo total arch replacement with xenopericardial roll graft. She then developed fungal infection of the elephant trunk with a near-occlusive vegetation and had redo-redo-descending aortic replacement via left chest. To our knowledge, this is the first report of a massive vegetation on an elephant trunk as a cause of near occlusion. That this surgical team successfully performed 3 high-risk operations is a tour de force and a tribute to the resilience of the surgical team and indeed the patient.

Thoracic aortic prosthetic graft infection has an incidence of less than 3% but is associated with 25% to 75% mortality.² There is limited evidence to guide management, although some strategies include a combination of (1) reoperation with aggressive debridement and aortic replacement with a rifampin-soaked Dacron graft, homograft, or xenopericardial graft; (2) coverage with native tissue (eg,

omental) flap; (3) local antibiotic infusion; (4) life-long suppressive antibiotics; and (5) wound drainage with or without negative-pressure dressings.³ Familiarity with the range of therapeutic options, and flexibility in modifying the plan in the face of unanticipated challenges, is key.

In the absence of robust evidence, guidelines for similar conditions can be instructive. The American Heart Association recommends that patients with fungal endocarditis receive parenteral antifungal therapy with amphotericin B plus an additional antifungal agent for a minimum of 6 weeks, followed by consideration of lifelong oral azole therapy.⁴ Guidelines for intra-abdominal graft infections suggest the use of biologic over prosthetic material. They suggest use of arterial allografts over venous autografts due to the morbidity associated with vein harvest and wound healing, and suggest the use of rifampin- or silver-soaked synthetic grafts.^{3,5} The basic principle of all infected prosthetic materials is source control with removal of all infected tissue and aggressive debridement. As always, a multidisciplinary team is recommended to include vascular and cardiothoracic surgeons, cardiologists, infectious diseases specialists, and radiologists, so that where evidence is lacking, clinical decision-making can benefit from broad expertise and collaboration.

We thank the authors for sharing this rare presentation of graft occlusion by massive vegetation, and we congratulate the authors on their heroic and innovative surgical strategy which is instructive for those encountering similar challenging scenarios.

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