

Trends in Outcomes from Endovascular Aortic Repair over Two Decades



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Background

- Endovascular therapy for aortic pathology has changed over the past two decades with the newer stent technologies.

Objectives

- We examine the outcomes of endovascular aortic repair in a small subset of patients.

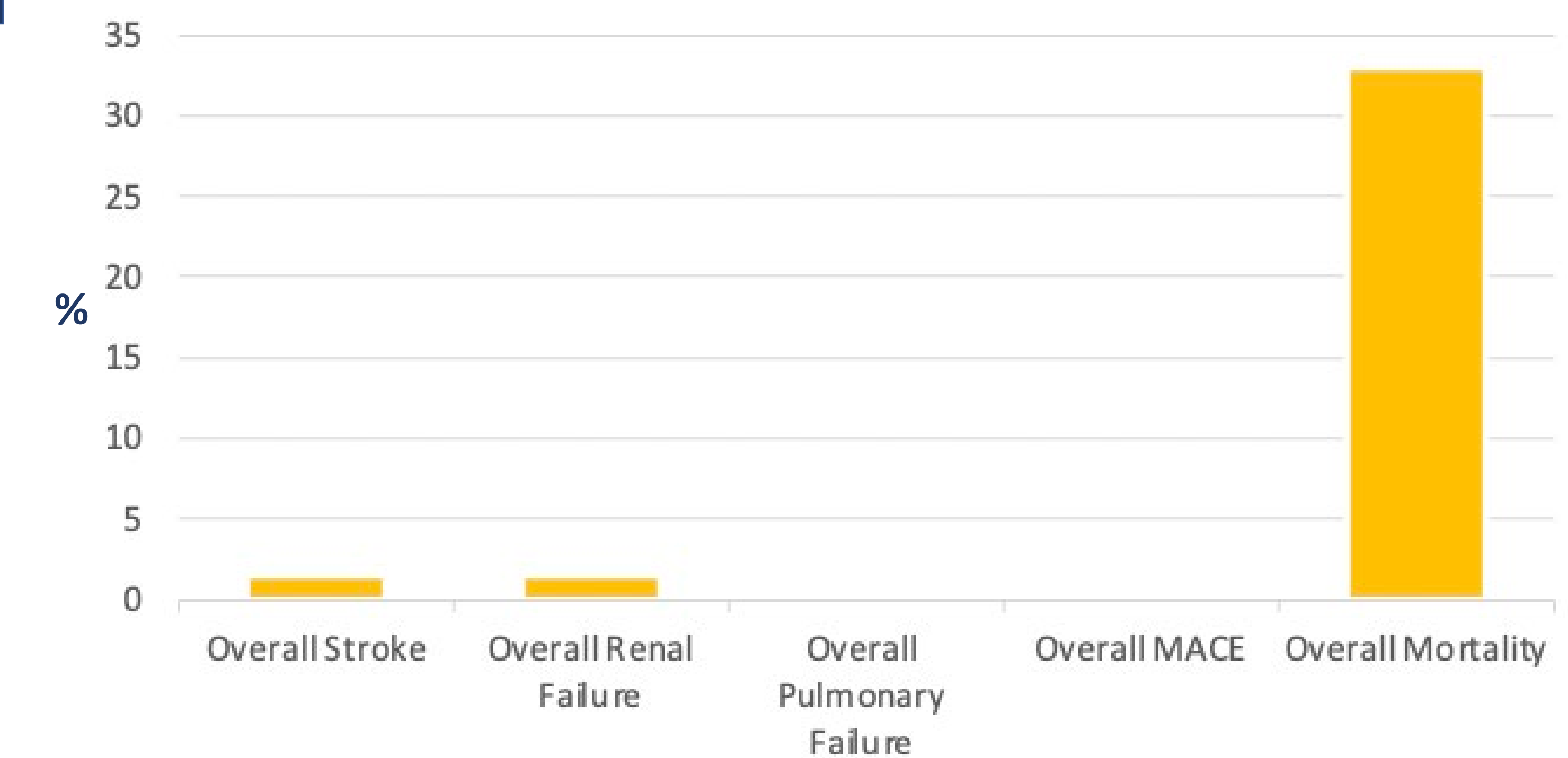
Methods

- Patients undergoing endovascular aortic repair were identified at an academic institution between 2003 and 2022.
- Descriptive statistics were used to analyze outcomes.

Results

- Subset of 63 patients analyzed out of 626 patient population
- Mean age was 74 with 76% men and 24% women
- Indication for operation was aneurysm/pseudoaneurysm in 55 (87%), aortic thrombus in five (8%), penetrating aortic ulcer in one (1.6%) and aortic trauma in one patient (1.6%).
- The type of surgery was endovascular aortic repair (EVAR) in 51 (81%), thoracic endovascular aortic repair (TEVAR) in six (9.5%), chimney endovascular aortic repair (ChEVAR) in two (3.2%), and fenestrated endovascular aortic repair (FEVAR) in four patients (6.3%) and 25% of patients were symptomatic.
- All patients were ASA class 3 or 4 with CAD in 38%, stroke in 13%, COPD in 33% and CKD in 11%.
- Mean estimated blood loss was 250 cc and surgery length 147 minutes.
- At thirty-days there were two deaths (3.2%) with two patients requiring reintervention (3.2%).
- At a mean follow-up of 32.6 months overall one patient suffered a stroke (1.6%) with 21 deaths (33%).
- Overall, three reinterventions were undertaken in two patients – one iliac stenting and one bypass.

Outcomes Following EVAR



Conclusions

This small subgroup demonstrates that endovascular aortic repair is durable and associated with excellent outcomes, across two decades of device use. Interestingly, a significant proportion of the patients died at a mean of 3 years following initial repair, unrelated to their aneurysm surgery, suggesting that patients with aneurysmal disease are prone to succumb to medical comorbidities at a high rate.