

AORTOILIAC ENDARTERECTOMY PROVIDES A DURABLE ALTERNATIVE TO BYPASS IN WOMEN AND PATIENTS WITH SMALL NATIVE VESSELS

S Trinh, MD¹; S Patel, MD²; A Tullos, MD³; A Lalani, MD¹; C Manea¹; A Chawla, MD¹; D Danos, PhD¹; C Sheahan, MD¹; M Sheahan, MD¹
¹Louisiana State University ²York Hospital ³Geisinger Health System

BACKGROUND

- Dr. EJ Wylie described first aortoiliac endarterectomy (AIE) in 1952 but use was constrained by external iliac disease
- Aortobifemoral bypass emerged as surgical alternative due to advent of prosthetic grafts but constrained by iliac disease extension
- Endovascular intervention alternative but concerns for use in small native vessels

OBJECTIVES

We hypothesize that AIE can provide durable results in patient with small vessels and isolated aortoiliac occlusive disease

METHODS

- Retrospective case review of patients who underwent AIE from 2006 to 2023
- Patient selection
 - Isolated disease
 - Small native vessels
 - Acceptable surgical risk
- Primary outcome was patency
- Secondary outcomes:
 - Major adverse limb event (MALE)
 - Survival
 - Vessel diameter
- Surgical approach
 - Transperitoneal
 - Decision to perform patch aortoplasty based on surgeon preference
- Statistical analysis
 - Wilcoxon rank sum test
 - Fisher's exact test
 - Kaplan Meier survival curve with 95% confidence interval

RESULTS

Table 1. Demographics

25 total patients	
Females	18
Males	7
Mean age	53.6 years
Mean follow-up	39 months

Table 2. Complications

Acute	Elective
Early iliac thrombosis (2)	
Late iliac occlusion (1)	Late iliac occlusion (1)
Deaths (2) Pulmonary embolus Subarachnoid hemorrhage	

Figure 1. Aortoiliac Endarterectomy

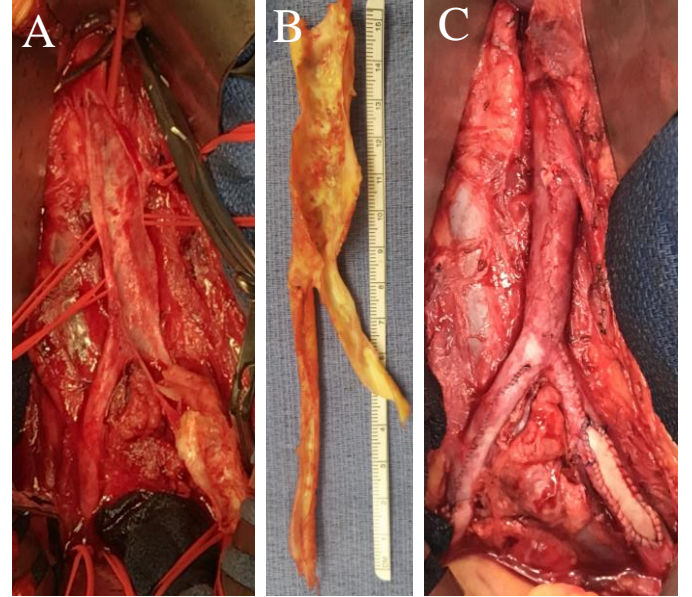


Figure 1A. Transperitoneal exposure aortoiliac vasculature
 Figure 1B. Aortoiliac plaque
 Figure 1C. Repaired aortoiliac vasculature after endarterectomy

Figure 2. Median Vessel Diameters

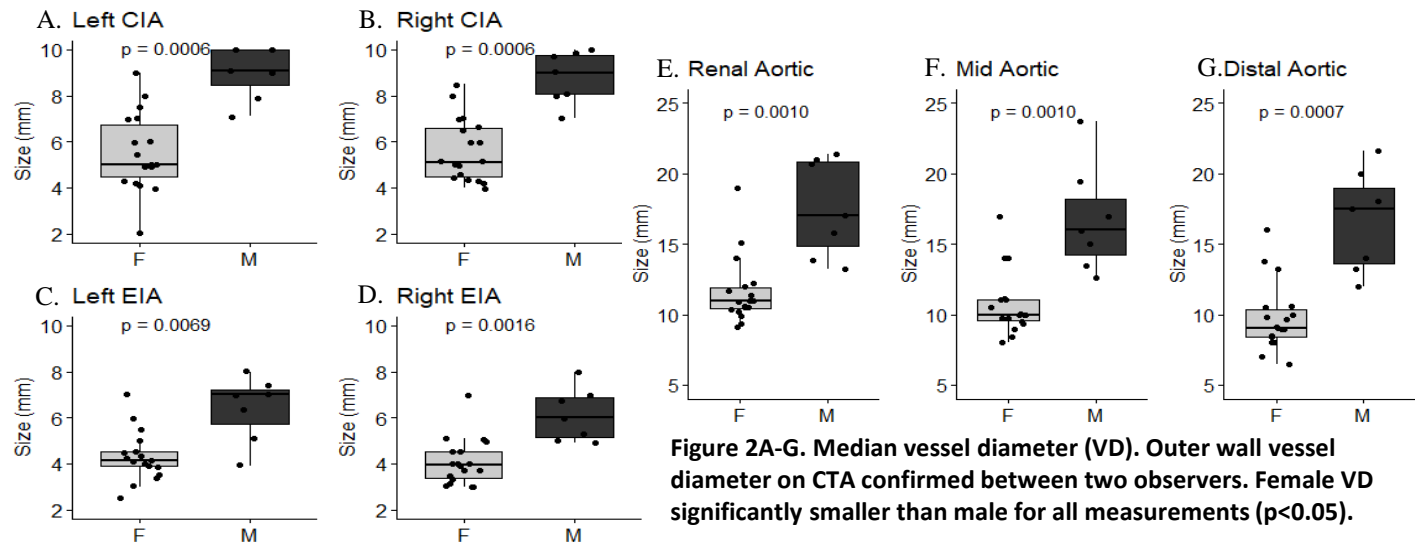


Figure 2A-G. Median vessel diameter (VD). Outer wall vessel diameter on CTA confirmed between two observers. Female VD significantly smaller than male for all measurements (p<0.05).

Figure 3. Primary and Secondary Outcomes

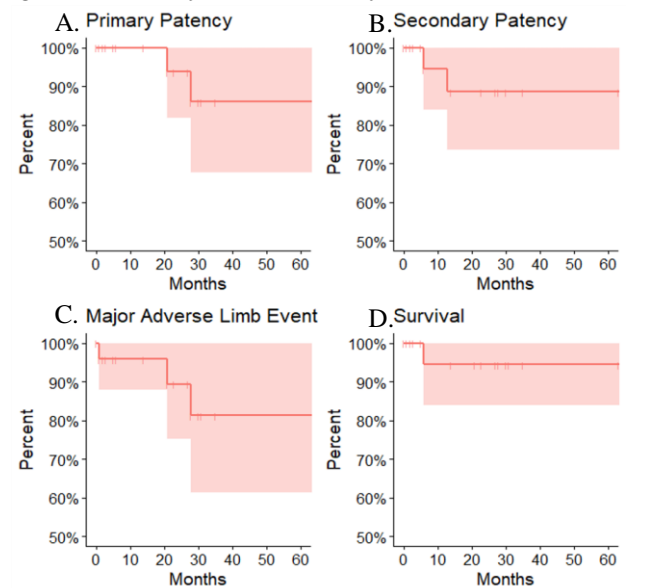


Figure 3A. Primary patency at 36 months was 89%.
 Figure 3B. Secondary assisted patency at 36 months was 81%.
 Figure 3C. Freedom from MALE at 24 months was 89% and at 36 months was 81%.
 Figure 3D. Survival at 30 days was 100% and overall survival was 94%.

CONCLUSIONS

- AIE is a durable option for females, patients with small vessels, and disease that is limited to the aorta and common iliac arteries
- AIE in setting of acute presentation appears to be associated with increased complication rate and lower patency



REFERENCES