

Comparison of Operative Characteristics and Outcomes after Infected Endovascular and Open-Surgical Abdominal Aortic Graft Excision

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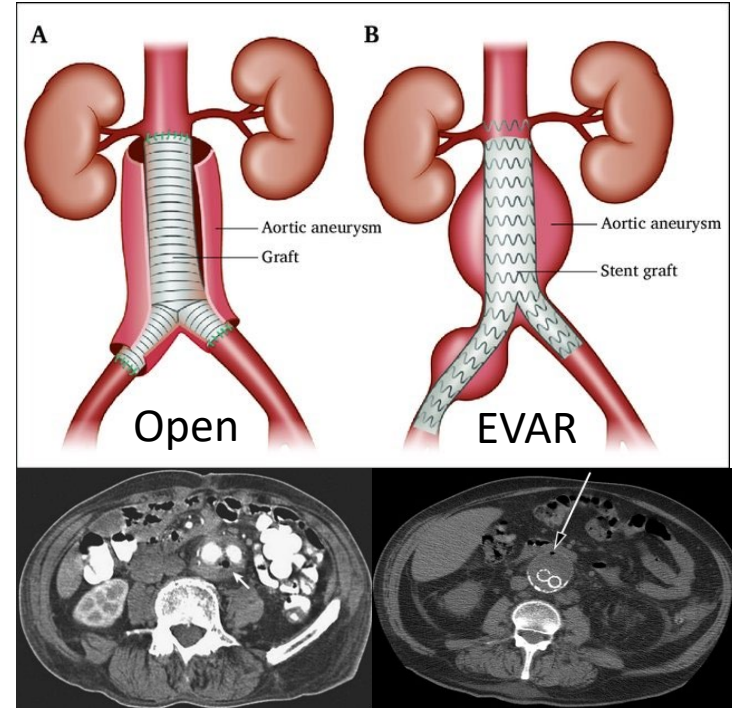
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No Disclosures

- Both endovascular (EVAR) and open aortic repair (OAR) are susceptible to graft infection
 - *EVAR has increasingly supplanted OAR*
- Indications for index repair & technical elements of graft removal differ for EVAR & OAR grafts



To date, no comparison between:
infected EVAR vs. open aortic graft

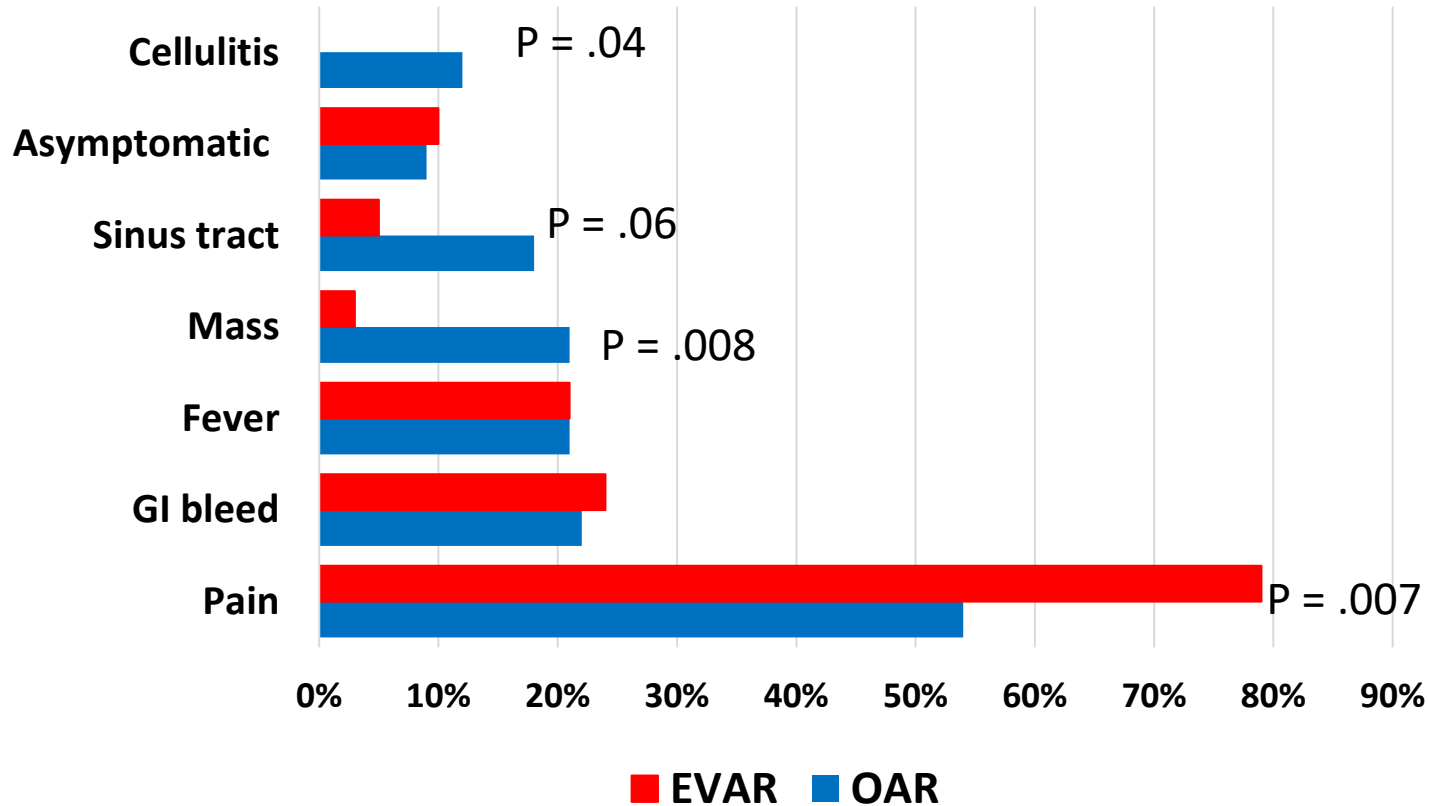
- Review our center's experience with aortic graft infection and compare outcomes between infected EVAR and infected open aortic graft excisions

- Study population: *abdominal* aortic graft infections (2004-2020)
- Compared infected EVAR vs. infected OAR graft excision
- Primary end-point: *30-day mortality*
- Secondary end-points: *in-hospital complications, major adverse limb events (MALE), and overall survival*
- Statistics: Fisher's exact test for categorical variables, Kruskal-Wallis for qualitative dependent outcomes, & Kaplan-Meier curves to assess freedom from secondary end-points

Patient Characteristics

Feature, % (No.)	OAR (N=104)	EVAR (N=38)	P-value
Age, years (range)	66 (29-89)	68 (28-86)	.1
Sex, male	65% (68)	79% (30)	.2
BMI (range)	24 (15-35)	24 (15-50)	.6
-Tobacco exposure	78% (78)	60% (22)	.03
-Peripheral artery disease	69% (72)	21% (8)	<.001
-End-stage renal disease	3% (3)	16% (6)	.01

**No difference in hypertension, dyslipidemia, coronary artery disease, or DM*



OAR Infection

- Cellulitis
- Sinus tract
- Palpable mass

EVAR

- Pain

Feature, % (No.)	OAR (N=104)	EVAR (N=38)	P-value
Multi-stage repair	21% (22)	16% (6)	.6
In situ reconstruction	70% (73)	70% (26)	.1
- Aorto-bi-femoral repair	59% (61)	8% (3)	<.001
- Aorto-bi-iliac repair	6% (6)	53% (20)	<.001
- Tube graft repair	3% (3)	16%% (6)	.01
Blood loss, L	2.4 (1-15)	2.4 (.5-7)	.4
Crystalloid, L	4.8 (1-15)	4.4 (1-11)	.8
PRBC transfusion, units	8 (0-59)	6 (2-19)	.5

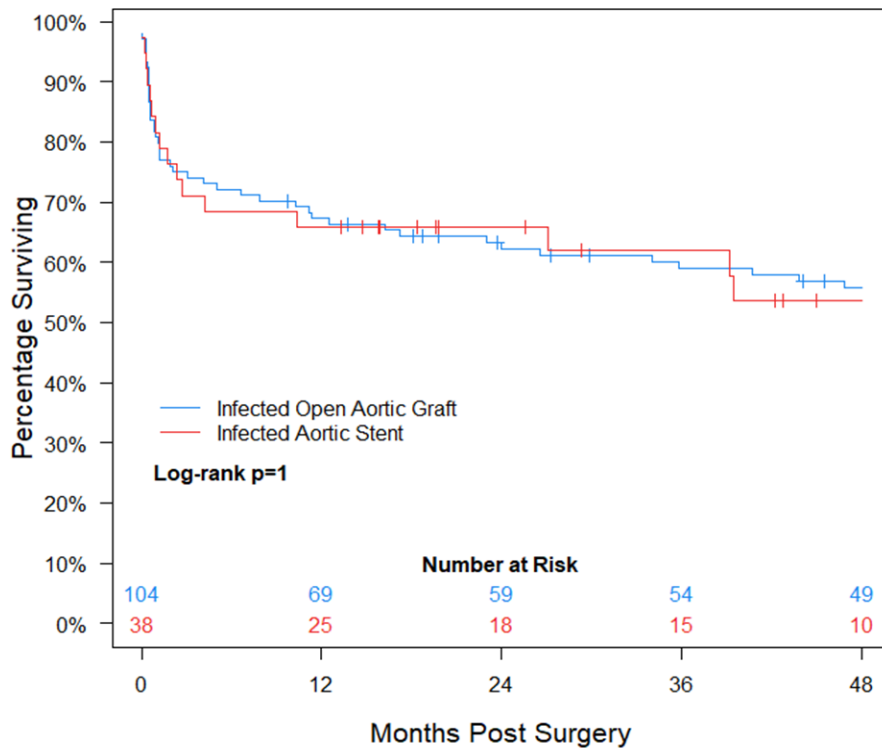
Outcomes

Feature			P-value
Follow-up			
30-day mortality			
Any complication			
- Pulmonary			
- Wound			
- Gastrointestinal			
- Renal			.4
- Cardiac	14% (15)	18% (7)	.6

- Gram negative infection
EVAR 53% vs. OAR 22%, P = .001

- Life-long suppressive antibiotics
EVAR 24% vs. OAR 10%, P = .05

Freedom From All-Cause Mortality



- Aortic-graft infection - ↑ morbidity & mortality
 - *No difference in overall morbidity & mortality between infected EVAR vs. infected open aortic prosthetic graft infection excisions*
- Infected EVAR: > GNR infection & GI-related complications
- Infected OAR: > MALE
- Differences in presentation, bacteriology and postoperative complications likely warrants different surveillance and suppressive antibiotic strategies during follow-up

Thank you

