

Introduction

- **AAA Diameter & Surgery:** The diameter of an abdominal aortic aneurysm (AAA) is a common criterion for surgical intervention.
- **Gender Differences in Guidelines:** Guidelines for females are less clear than for males.
- **SVS Recommendations:**
 - Repair recommended at **>5.0 cm for females.**
 - Repair recommended at **>5.5 cm for males.**
- **Sub-Diameter Repairs:** Common due to factors like morphology, anatomy, and symptoms.
- **Aortic Size Index (ASI):** Considers aortic diameter relative to body surface area. Proposed as a potentially better indicator for AAA repair in females.

Methods

- **Study Population:** Patients aged **18-90** undergoing AAA repair between **2011-2020** at a single institution.
- **Data Analysis:** Chi-square tests performed using **R-statistical software.**
- Comparisons made between **males and females.**
- **Variables Analyzed:**
 - Co-morbidities
 - Treatment indications
 - Aneurysm size at treatment
 - Aneurysm morphology

Results

Total Patients: 353 underwent AAA repair. **Treatment Based on Aneurysm Size:** 175 patients (**49.57%**). **Treatment for Symptoms:** 171 patients (**48.44%**). Remaining patients were treated for rupture.

Condition	χ^2	p-value
AAA	0.3246	0.5688
TAAA	0.3246	0.5688
HTN	0.8075	0.3689
HLD	0.2143	0.6434
ESRD	0.9143	0.3390
CKD	0.1429	0.7054
Tobacco	1.2915	0.2558
Rupture	1.6537	0.1985
Symptomatic	8.9179	0.0028
Size	8.6294	0.0033

Table. 1 Comparison of Comorbidities Between Males and Females Undergoing AAA Repair

When comparing treatment indications:

- **Males** were more likely to undergo treatment for **symptoms (41.5%)** compared to **females (31.3%)**, with a **p-value of 0.00282.**
- **Females** were more frequently treated according to **Society for Vascular Surgery size guidelines (59.4%)** than **males (41.4%)**, with a **p-value of 0.00331.**
(Note: Total percentages do not sum to 100% due to the inclusion of ruptured AAA cases.)

Conclusion

- **Study Period:** AAA repair cases analyzed from **2011-2020.**
- **Gender-Based Differences in Treatment Indications:**
 - **Males** more often underwent repair for **symptomatic AAA.**
 - **Females** were more frequently treated based on **size guidelines.**
- **Key Implication:** Highlights the need for **gender-specific considerations** in AAA management.
- **Surgical Thresholds:** Differences in **symptom-based vs. size-based intervention** warrant further evaluation.
- **Future Directions:** Investigating **aneurysm morphology** and **aortic size index** may help optimize treatment strategies for both **male and female** patients.

