How And Why Aortic And Lower Extremity Artery Gender Differences Matter In The Treatment Of Vascular Disease: What Can Be Done To Offset This Problem

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Disclosures

- No relevant disclosures
  - Site PI: Gore, Penumbra, Inari
  - DSMB: Veloxis
- Co-founder: Annual Meeting May 2-3,2025 Chicago

ISWVS INTERNATIONAL SOCIETY FOR WOMEN VASCULAR SURGEONS

https://womensvascular.org/membership

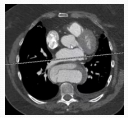
Women's VASCULAR SUMMIT

Aortic Aneurysms Issues

Issue	Outcome	What we can do
Screening not covered in most countries	More discovered symptomatic/ruptured	Advocate for screening with data. Support WARRIOR trial
Faster rate of growth	Increase risk rupture	Research as to when to repair. WARRIOR trial
Rupture at smaller size	Increase mortality	
Different location concurrent aneurysms	More complex repair, may miss thoracic aneurysms	CTA chest for women with AAA. Advances in Endovascular complex repair
Not offered intervention at same rate	Increased mortality	Educate colleagues- Offer appropriate interventions
Historically worse outcomes with open surgery	Higher rate Loss of Independence and Mortality	Granular Research to understand why
Historically worse outcomes with endovascular	Higher rate mortality/complications	Work with industry on lower profile devices. Include women in device studies

Aortic Dissection Issues

Issue	Outcome	What we can do
Atypical presentations	Missed or delayed diagnosis	Educate on the "atypical" presentations- VS, ER
More often complicated dissection	Higher risk for adverse outcome	May have higher need for intervention
Not as well medically managed	Increased progression of dissection, adverse outcome	Educate to treat appropriately with medical management; appropriate intervention



Peripheral Arterial Disease Diagnosis Issues

Issues	Outcomes	What we can do
Lack of recognition by patient	Delayed presentation to PMD	Education to public
Lack of recognition by physicians	Delayed referral to Vascular	Education to primary care- including atypical symptoms
Atypical symptoms	Increased risk of misdiagnosis	Educate primary care & Vascular surgeons
More advanced disease at presentation	Higher risk of limb loss, loss of independence	Aggressive medical management; educate to identify earlier stage disease
More frail at time of presentation	More loss of limb, loss of independence	Increase Prehabilitation for non emergent
More functional impairment	Later diagnosis due to lack of recognition; poorer recover/loss of independence	prehabilitation

Peripheral Arterial Disease Treatment Issues

Issue	Outcome	What we can do
Decreased rate revascularization	Higher risk amputation mortality	Educate VS to offer intervention to women
Decreased prescription rate for statin and antiplatelet	Higher rate of mortality; limb loss	Educate and track (VQI)
Decreased adherence to medication when prescribed	Higher rate of intervention failure	Research as to why decreased adherence (cost, side effects, knowledge)
Higher risk of Loss of Independence	Higher readmission rate; higher amputation rate	Earlier intervention; prehabilitation; consider less invasive for more frail patients
Technical issues- devices Not sized for women Not assessed adequately in clinical trials	Different outcomes for women than men	Include women in clinical trials- mandate to match to population

Overall: Issues with PAD and Aortic Disease in Women

- Delayed diagnosis and treatment
- Inadequate participation in clinical/basic science studies
  - data may not be accurate
  - devices not "built" for women
  - medication outcome may be different
  - "approved" therapies may not be beneficial for women

How we increase women's enrollment in clinical trials

- Deliberate effort
  - has been successful with NIH funded studies after mandate
- Targeted recruitment for women
  - locations; timing, social media outreach
- Ensure sites can recruit women
  - unlikely in VA
- Elevator speech- why women should participate "do it for your daughter"
- Address social determinant issues-
  - often live alone, economically challenged, education level (especially for elderly), autonomy issues with some religions/cultures may pose barriers to participation
- Consents need to address womens concerns- childbearing issues
- Timing of visits
  - women have more caregiver responsibility- support for this or alternate times
- More Female PI
  - increase trust- like tends to trust like
- Ensure Inclusion/Exclusion to not unnecessarily exclude women
  - BMI, vessel size- unless truly critical for trial
- Power analysis to assess men and women separately as well as all together
  - ensure adequate enrollment
  - close study to men when number met

What else we can do

- Tailored diagnostic plans for women
- Increase representation of women patients in ALL vascular research
- Devices and medication may need to be tailored to women
  - Understand biologic differences
    - may require different anticoagulation profile management
- Educate physicians as to "womens' symptoms"
- Educate public as to symptoms in women
- Assess reasons for lack of prescribing of appropriate medication
- Assess social determinants that may impact patient compliance with plan of care