

EDITORIAL

Women in vascular surgery: Every coin has two sides

Nana Petroula, Kölbel Tilo

German Aortic Center, Department of Vascular Medicine, University Heart and Vascular Center, UKE, Hamburg, Germany

Female sex has been considered as a factor of increased mortality and morbidity after endovascular and open repair of diseases affecting any segment of the aorta.^{1,2} From the ascending down to the abdominal aorta, females present higher risk for early death and severe complications compared to males, including stroke and acute kidney injury; with both being related to decreased survival during follow-up.^{2,3} However, when endovascular repair is feasible among female patients, it tends to provide significant benefits in terms of mortality and early morbidity compared to open procedures.^{1,3} A variety of factors have been related to worse outcomes among females, beginning with anatomic characteristics, as target and access vessels diameter, presence of atherosclerosis, and continuing with higher rates of underdiagnosed comorbidities, including cardiac disease.³

Similarly, despite that the prevalence of peripheral arterial disease (PAD) is higher among women, female patients remain undertreated, as they are less likely to be evaluated by a vascular specialist and receive appropriate medical management, as suggested in the current recommendations, compared to men.^{4,5} The different patterns of the disease, including higher rates of asymptomatic PAD or PAD with atypical presentation may affect adequate management in women and could explain the worse outcomes among females with PAD.⁵ Even when treatment is provided, female patients with PAD tend to report a lower quality of life after repair compared to males, while they present higher rates of depression and cardiovascular mortality during follow-up.⁵ Carotid interventions, including carotid endarterectomy and stenting, for symptomatic carotid stenosis have been also related to worse outcomes in female patients, with a higher incidence of neurologic and cardiac adverse events.⁶ No difference has been found though between males and females managed for asymptomatic carotid atherosclerosis, setting rationally the question for potential earlier intervention in females.⁶

In addition to physiologic and biological parameters, social

factors may also contribute and affect outcomes when reporting on female populations. Despite being under-investigated, economic status and social and family roles may lead female patients to lower and/or later access to health facilities, and timely appropriate management.⁷ Despite that, according to the World Health Organization, cardiovascular diseases are the main cause of mortality among women, their importance seems to be still undervalued from both health providers and female patients.⁸ On one hand, health providers often lack awareness on sex and gender related research findings and clinical parameters while female patients remain under-informed about the presentation, symptoms and signs of vascular diseases.⁸ Understanding the impact of biological, social, and cultural aspects on health behavior and disease patterns may assist providing a more holistic approach and further, ameliorate the short and long-term outcomes in female patients suffering from vascular diseases.

Passing from patients' aspect to professional matters, women remain an underrepresented group in vascular societies.⁹ As presented a few years ago by Prof. Mastracci, women represent a minority in the largest vascular meetings, with 23.3% of the chair and panel positions being administrated to them.⁹ While these numbers signify the need for changes from societies' side to strengthen diversity, parameters as lacking role models and the complexity of women's social role potentially affect their decision and make vascular surgery an unattractive field of practice. Even in general terms, medicine, which has become a popular professional choice among women, seems to be at the end an unfriendly environment, with recent mental health data showing that female health providers present 7.5% higher rate to commit suicide compared to the general female population.¹⁰

Measures to increase awareness on vascular diseases and their associated risks among female patients and their environment could be a first step to improve diagnosis and management. The investigation of data focusing on female populations, including the total spectrum of vascular diseases, can highlight the pitfalls of the currently provided treatments and allow to direct our efforts to improved outcomes. Endovascular aortic repair findings show that we are probably on the right path to manage female patients with aortic diseases, even if further steps are needed to optimize management.³ However, the awareness should extend also within the working environment. Accepting the differences related to biological and social factors, in addition to stronger role models and support from the official organizations, would encourage young female colleagues to become active part of the vascular

Author for correspondence:

Petroula Nana

German Aortic Center, Department of Vascular Medicine
University Heart and Vascular Center UKE Hamburg
Hamburg, Germany

E-mail: petr.nana7@hotmail.com

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community. Through the years vascular surgery is becoming a field, where womens' creativity can be expressed and appreciated.

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