



# Multidisciplinary care for women with aortic disease: the way to improve disparities

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Cardiovascular disease (CVD) is the leading cause of death in women. In the 1990s, while CVD mortality was decreasing in men, it was increasing in women (1). Many have reported on the disparities in traditional CVD risk factors and their impact on women's cardiovascular health, such as the higher prevalence of hypertension, yet poorer control than men. Also, women are less physically active and are more vulnerable to the adverse effects of psychosocial stress (2).

In addition, there are sex-specific risk factors and comorbid conditions associated with an increased risk of CVD in women. These include early age at menarche, polycystic ovary syndrome, autoimmune disorders (2–10 times more common in women), breast cancer, chronic kidney disease, and depression, which is two times higher in women (2).

In the past two decades, cardiac care has evolved significantly, transforming from a single cardiologist or a primary care physician managing patient care to a multidisciplinary approach, with the creation of heart teams as a critical component of contemporary cardiac care (3). Those teams have been more crucial in caring for women with CVD, as the sex disparities with these diseases have led to the opening of many heart centers for women. In addition, they have pushed national healthcare organizations to collaborate to improve CVD outcomes in women and eventually, develop sex-specific CVD guidelines. All those efforts have led to a decline in CVD mortality in women from 2000 to 2010 (1).

The literature has repeatedly demonstrated sex and gender disparities in care in patients with aortic disease. Women present at an older age, have a faster aortic

aneurysm growth rate, worse aortic-related outcomes, present later to the hospital, and have a higher risk of dying outside of the hospital (4–6).

Women are also underrepresented in clinical trials and most are not designed to answer sex- and gender-specific questions.

Many published works advocate for multidisciplinary care and forming aortic teams for managing patients with complex aortic disease, and these teams have demonstrated improved outcomes (7–9).

I would take it one step further by saying that women-specific aortic teams are crucial for bridging the existing gaps in knowledge and outcomes. Women's health goes beyond the traditional approach of reproductive and nonreproductive care. I believe a holistic, longitudinal approach to women's health is needed—one that considers the sex- and gender-specific risk factors and the biological changes throughout their lives. This approach has been shown to improve the quality of care for women and their overall experience and outcomes in cancer, primary, and cardiac care (1,10,11).

Most traditional CVD risk factors are significant risk factors for aortic disease, and the sex- and gender-specific risk factors are most likely just as important in aortic disease. However, there is a gap in our knowledge and research on the influences of those sex- and gender-specific risk factors in aortic disease in women. Most large aortic databases lack data on both hormonal history and social determinants of health (SDOH). Therefore, attempting to answer those questions using the existing approaches is deemed to fail. We must learn from other existing women's

teams, get out of our specialty zone, and collaborate with other specialists and healthcare workers.

Ideally, the women's aortic team should include vascular and cardiothoracic surgeons, cardiologists, gynecologists, maternal-fetal medicine (MFM), geneticists, internist/primary care, psychologist, anesthesiologist, nurses, pharmacy, and social workers. The specific patient's need from the aortic team would change throughout the different phases of her life. However, her point of contact with the team remains constant through a single healthcare worker (a nurse/coordinator), which allows for familiarity and helps in navigating the complex modern healthcare system.

In younger patients, during childbearing age, the MFM, geneticist, and anesthesiologist would be more significant in giving preconception counseling and helping with prenatal care and delivery plan. In older age patients, the internist/primary care physician and gynecologist would have an essential role in considering postmenopausal hormonal changes as well as the presence of other comorbidities. The cardiologists and surgeons will play a central role at all stages of the patient's life, providing input on risk factor control and treatment options, depending on the disease stage (size of aorta, symptoms) and, eventually, performing the needed intervention.

As for psychological support and evaluation, I believe it should be incorporated into all aortic patients' management. With women at a higher risk for developing depression, anxiety, and posttraumatic stress disorder, it is imperative to incorporate that in all treatment plans. Even though most physicians are aware of the importance of SDOH on clinical outcomes, only a small portion will inquire about or include SDOH questionnaires for their patients. One of the barriers that has been reported is the lack of time and knowledge on best tools. Social workers will assist in this and can identify risks for health insecurities, and help the team implement an individualized treatment plan, which accounts for the social conditions of individual patients.

Those teams would benefit from a woman physician lead. The Cardiovascular Disease in Women Section of the American College of Cardiology conducted a systematic review of studies examining patient-provider sex/gender concordance. They found that while female patients were less likely to receive guideline-based care when treated by male physicians, female physicians have better patient outcomes compared to their male colleagues (12). This would also be an opportunity to increase women's representation in leadership positions.

There is no need to reinvent the wheel. We must

simply implement what others have proven effective and successful in caring for women's health. Women's aortic teams and centers can improve the care and experience for patients while bridging the knowledge gap by influencing and guiding the design of future trials with a holistic view of female patients with aortic disease. This will eventually eliminate the existing disparities.

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## Footnote

*Conflicts of Interest:* ROA is a consultant for Medtronic and EndoRon Ltd. The author has no other conflicts of interest to declare.

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