INVITED COMMENTARY

Should We Look Differently at Aortic Aneurysm in Women?

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The interesting study by Wallinder et al.[1] retrospectively analyses the prevalence of synchronous and metachronous aneurysms located in different arterial regions (thoracic aorta, common iliac, common femoral, and popliteal) in a relatively large cohort of women operated on or under surveillance for abdominal aortic aneurysm (AAA). Data from two Swedish hospitals were retrieved, analysing a period of 31 years between 1982 and 2013. In the study cohort of 339 women presenting with an AAA, the prevalence of thoracic aortic aneurysm (TAA) was 31%, and aneurysms of common iliac 9.3%, common femoral 4.3% and popliteal arteries 4%. The authors concluded that women diagnosed with AAA have a considerable risk of synchronous and metachronous TAA, often of clinical importance. Moreover for the first time, a correlation was observed between peripheral aneurysms and AAA among women, in particular when both AAA and common iliac aneurysm are present.

The rationale behind the study came from a previous report by the same group showing that after AAA repair women suffer a much shorter life expectancy than women without AAA, whereas men with repaired AAA recover to almost the same life expectancy as unaffected men.[2] The authors hypothesised that the possible explanation of this lower than expected life expectancy in women with AAA may be related to rupture of undiagnosed aneurysms in locations other than the infrarenal aorta, or from acute limb ischaemia secondary to aneurysms in the lower limbs. Therefore, diagnosis and treatment of such aneurysms may improve survival. Unfortunately, the authors do not provide any data to support such a hypothesis.

Increasing evidence clearly shows that AAA have sex associated differences in almost every aspect of the disease from pathophysiology and epidemiology to morbidity and mortality. Women are three to five times less prone to develop an AAA at age 65–70 years than men,[3] probably because of the immunomodulating effects of oestrogen. However, once an AAA develops, the natural history in women appears to be more aggressive, with more rapid expansion, a higher tendency to rupture at smaller diameters, and higher in hospital mortality both in intact and ruptured AAA.[4] Aneurysms developing in different locations may present similar characteristics to AAA in women, although this is yet to be shown.

The current study by Wallinder et al.[1] presents some important limitations, mainly because of the retrospective design, the very extended observation time, the irregularly performed examinations of the other arterial regions, and the consequent risk of selection bias. However, there seems to be quite strong evidence in this study of the increased risk of synchronous and metachronous TAA in women diagnosed with AAA, data also confirmed by a previous study, showing a significantly higher prevalence of TAA with AAA in women than in men.[5] More rigorous prospective studies are warranted on the association between AAA and aneurysms in other locations and their clinical impact. In the meantime it is reasonable to recommend a chest CT scan when an AAA is diagnosed, especially in women.

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