
Sex-Based Disparities in Outcomes After Cardiac Surgery



Researchers at Mass General Brigham found that women have a lower risk of developing postoperative atrial fibrillation (poAF) after surgery compared to men but face a higher risk of long-term mortality once poAF occurs. The study is published in JAMA.

The objective of the research was to identify the protective factors that reduce the incidence of poAF in women and understand the reasons behind their increased vulnerability once poAF develops. While it's already known that female patients face higher risks of complications and mortality following heart surgery, the impact of sex on poAF—the most common complication after cardiac surgery—has been less clear. This new study aims to fill that gap by exploring two critical questions: whether sex influences the development of poAF and if long-term mortality related to poAF differs between women and men.

The study analysed data from 21,568 adult patients who underwent open-heart surgery at Massachusetts General Hospital (MGH) and Brigham and Women's Hospital (BWH) between October 1, 2016, and January 1, 2022, with mortality follow-up extending through December 2022. After multivariate analysis, the findings showed that women had a lower risk of developing poAF compared to men. However, over the follow-up period, women with poAF had a significantly higher adjusted risk of mortality—31% compared to 17% in men.

Overall, findings show that although women may possess protective factors against the initial development of poAF after cardiac surgery, they become more vulnerable to the long-term complications and mortality associated with the condition. The researchers emphasise the need for more vigilant monitoring and extended follow-up care for women who develop poAF.

One possible explanation for the lower incidence of poAF in women is the beneficial effects of oestrogen in reducing inflammation and mitigating endothelial dysfunction. Potential links between poAF and social determinants of health may offer additional insights into the relationship between sex, poAF, and long-term mortality.

Study authors highlight that these sex-based disparities point to broader issues within healthcare systems, and addressing them requires first recognising these differences in outcomes. They also emphasise the importance of including diverse study participants in clinical research, particularly regarding sex-based diversity. Future studies could help uncover the exact mechanisms behind the sex-based disparities, but this research underscores the need for a holistic approach to patient care, taking into account the diverse backgrounds of patients undergoing cardiac surgery.

Source: [Brigham and Women's Hospital](#)

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