

Heart Congress and Cardiac Surgery

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Outcomes of Cardiac surgery in women vs men patients– insights from Israel national registries

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Background: Women are associated with increased morbidity and early mortality in patients undergoing cardiac surgery. We aimed to compare the short- and mid-term mortality after cardiac surgery of women patients to men patients using national registries: the Adult Cardiac Surgery Registry (ACSR) and the National Mortality Registry (NMR).

Methods: The study population comprised of 8,826 adult patients who undergone one of the followed cardiac surgeries- (Isolated Coronary Artery Bypass Graft (CABG), Isolated Aortic valve replacement (AVR) , Isolated Mitral valve replacement (MVR) or CABG+ valve related procedure) between January 2017 and April, 2019. Early and mid-term mortality data were obtained by linking to the NMR. Causes of death were retrieved from death certificates and from hospitalization summaries. Kaplan-Meier plots were created for each cohort and were compared by log-rank test. Cox regression analysis was performed to identify predictors of short and mid-term survival.

Results: One thousand nine hundred and ninety women patients (mean 66.2±10.3 years, 85.5% Jews) were compared with 6,836 men patients (mean age 64.2±10.1 years, 83.5% Jews). Median follow-up for women patients was of 33.4 months (IQR; 25.0-41.1) and for men patients were 33.2 months (IQR; 25.6-41.1). In women compared to men patients, 30-day mortality was higher (4.1% vs. 2.2%, respectively, $p=0.0001$) and 1-year and four –year survival was significantly lower (92.3 ± 0.6 vs 95.4 ± 0.3 and $86.3\%\pm 1.2$ vs. $90.4\%\pm 0.5$, respectively, $p=0.0001$). Cox regression analysis revealed that risk factors that were found to be significant independent predictors of reduced mid-term survival included: women (HR=1.31, 95%CI; 1.09-1.6), Arabs (HR=1.5, 95%CI; 1.2-1.9), isolated MVR procedure (HR=1.5, 95%CI; 1.06-2.2) and CABG+ valve related procedure (HR=1.8, 95%CI; 1.3-2.4).

Conclusions: Women are at higher risk compare to men for 30-day and mid-term mortality post cardiac operative procedures. These data should be discussed by the cardiac team, to optimize patient selection and maximize procedural value.

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