Higher Rates of Repeat Coronary Revascularizations in Young Women

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Background: Prior studies suggest that younger women are at higher risk for adverse events following PCI; however, no long-term, multi-center assessments exist.

Methods: We evaluated 10,963 patients undergoing PCI enrolled in the NHLBI-sponsored Dynamic Registry and compared long-term outcomes in women <50 years (n=394), men <50 years (n=1141), women ≥50 years (n=3403), and men ≥50 years (n=6025) old.

Results: At baseline young women were more likely to have cardiovascular risk factors but less severe CAD compared to young men. At 1 year, young women had a higher incidence of major adverse events (death/MI/CABG/repeat PCI) compared to men of similar age (27.8 vs. 19.9%, p<0.003). Cumulative rates of death and MI were comparable by sex; however, young women had higher rates of repeat revascularizations (CABG: 8.9 vs. 3.9%, p<0.001; adjusted Hazard Ratio [aHR] 2.4, 95% CI 1.5-4.0; repeat PCI: 19.0 vs. 13.0%, p=0.005; aHR 1.6, 95% CI 1.2-2.2). Sex differences in repeat revascularizations persisted at 5 years, with young women at higher risk compared to young men (CABG: 10.7 vs. 6.8%, p=0.04; aHR 1.71, 95% CI 1.01-2.88; repeat PCI for target vessel revascularization: 19.7 vs 11.8%, p=0.002, aHR 1.8, 95% CI 1.24-2.82). In contrast, there were no differences in rates of MACE, death, MI, CABG, or repeat PCI in women and men ≥50 years old.

Conclusions: Young women are at higher risk for progression of atherosclerosis leading to repeat coronary revascularizations in the 5-years following PCI. Further research is warranted to more fully characterize the higher risk profile of young women with early CAD.