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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.

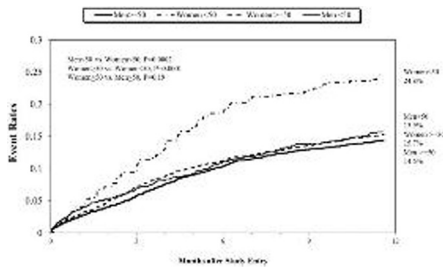


Figure 1. One Year Cumulative Event Rates for Repeat Revascularizations^{1,2}

¹ Composite of CABG/Repeat PCI

² Excluding planned, staged PCI

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.

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Triple Antithrombotic Therapy After PCI:4-years FU

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Background: Treatment in p (patients) who need oral anticoagulation and antiplatelet therapy after PCI (percutaneous coronary intervention) are from small and heterogeneous series. There are few data on long-term results. Our aim was to compare the long-term incidence of cardiovascular events (MACE: cardiac death, nonfatal MI, repeat revascularization and stroke) and bleeding (BARC criteria) between p with triple therapy (TT) and those with dual antiplatelet therapy (Non-TT) at discharge after PCI

Methods: Prospective, observational study of 769 consecutive p undergoing PCI between Oct 2007-Apr 2011. The probability of assigning each p for each group was adjusted using propensity score. We compared the incidence of MACE and bleeding in both groups. Survival was evaluated using Kaplan-Meier and log-rank test and multivariate analysis applying the Cox-proportional hazards model.

Results: From overall sample, the 13.3% were included in the TT group (102p, age 72.7 ± 9.9 years; CHA2DS2-VASC 3.7±1.5; HASBLED 2.7±1.3) and 87.7% in the Non-TT (667p, age 65.5 ± 11.6 years; CHA2DS2-VASC 1.8±1.7, 1.1±1.1 HASBLED). During follow-up (26.5 ± 14.6 months), the cumulative incidence of MACE (28.4% vs. 19.9%, p=0.03), due to a higher incidence of stroke (11.9% vs 1.8%, p<0.05), Overall mortality rate (14.7% vs 9.7%, p=0.02) due to non-cardiac mortality (8.8% vs 4.0%, p=0.03) and the rate of bleeding (29.4% vs 8.4%, p<0.05) was unfavorable for the TT group. Most bleeding in both groups were clinically minor (BARC<3 24.5% vs 7.8%; BARC≥3 4.9% vs 0.5%), respectively. The average time to MACE was lower in the TT group versus Non-TT (40.9, 95%CI[36.4-45.4] vs 48.6, 95%CI[46.6-50.7] months, log-rank test p<0.05). There were no differences in the mean time to bleeding between the two groups (327±85 vs 414±67 days, log-rank test p=0.72).

Conclusions: In the long term, patients on triple therapy after PCI constitute a high-risk population with increased incidence bleeding of non-cardiac death and major cardiovascular events, due to high rate of stroke. Bleeding rate was higher in this group at the expense of minor bleeding events.

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Spontaneous coronary Artery dissection in sudden death victims and surviving patients: which are the differences?

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Background: Spontaneous coronary artery dissection (SCAD) is a rare condition with a broad clinical spectrum. This study aims to compare the clinical and morphologic characteristics of SCAD between patients who died suddenly or within 24 hours and those who survived the event.

Methods: Eighteen consecutive patients who died due to SCAD confirmed at autopsy and 57 consecutive patients who presented with acute coronary syndrome (ACS) confirmed by invasive measurement were assessed.

Results: All patients who died were women vs. 82.5% in the survivors group. The mean ages were 42.2 (30.9-53.2) and 52.6 (41.7-63.5), respectively (p = 0.01). No significant differences for associated systemic diseases or drug therapy between groups was found except for hypertension, which was more frequent in the second group (5.6% vs. 65.1%, respectively; p<0.001) The first group presented with sudden death in 12 cases (66.7%) and acute myocardial infarction in 6 cases complicated by cardiogenic shock (33.3%). In the other group, 29 cases presented as STEMI (50.9%), 17 as NSTEMI (29.8%) and 11 as other ACS (19.3%). A significant difference in location of SCAD with a more prevalent proximal site was found in the first group and more distal in the second group (72.2% vs. 45.6%; p = 0.05). Left main trunk was found more frequent in first group (38.9% vs 1.8% P<0.001). Moreover, a more prevalent intramural haematoma without intimal tear was found in the first group (77.8% vs. 36.8%; p = 0.002).

Conclusions: Among patients with SCAD, proximal coronary location and presence of intramural haematoma without discernible intimal tear seem to be related to a greater likelihood of early death, mostly in the forms of sudden cardiac death.