



ACC.15

TCT@ACC-i2 | innovation in intervention

A1859
JACC March 17, 2015
Volume 65, Issue 10S

TCT@ACC-i2: Interventional Cardiology

SEX DIFFERENCES IN CORONARY PATHOPHYSIOLOGY IN PATIENTS WITH ANGINA IN THE ABSENCE OF OBSTRUCTIVE CORONARY ARTERY DISEASE

Poster Contributions

Poster Hall B1

Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Pharmacotherapy and Complex Coronary Interventions

Abstract Category: 36. TCT@ACC-i2: IVUS and Intravascular Physiology

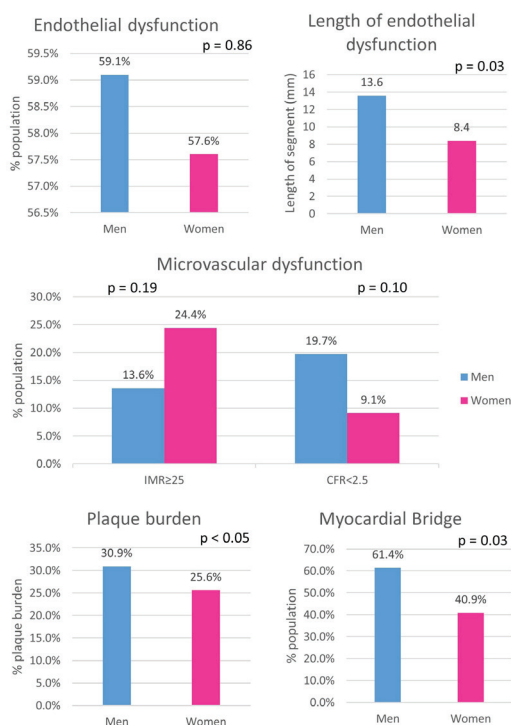
Presentation Number: 2103-277

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Background: Sex differences in coronary pathophysiology have been suggested, but these data are mostly from all women studies. We investigated sex differences in endothelial dysfunction, microvascular dysfunction (MVD), plaque burden, and myocardial bridging (MB) in women and men presenting with angina in the absence of obstructive CAD.

Methods: We prospectively enrolled 137 women and 44 men. We performed endothelial function testing, the index of microcirculatory resistance (IMR), coronary flow reserve (CFR), fractional flow reserve, and intravascular ultrasound (IVUS) in the left anterior descending artery. Endothelial dysfunction was defined as a decrease in luminal diameter of >20% after intracoronary acetylcholine, MVD as an IMR ≥ 25 , and MB as an echolucent half-moon sign and/or $\geq 10\%$ systolic compression on IVUS.

Results: Endothelial dysfunction was present in 105 (58%) patients, MVD in 39 (25%), and MB in 83 (46%). There were no sex differences in the presence of endothelial dysfunction or MVD, although women had a lower CFR than men (3.83 ± 1.85 vs. 4.86 ± 1.81 , $p < 0.05$). Men had greater plaque burden, a longer length of endothelial dysfunction, and a higher incidence of MB (figure).



Conclusion: While women are more likely than men to present with angina in the absence of obstructive CAD, women are not more likely to have endothelial dysfunction or MVD than similarly presenting men. Instead, men have greater plaque burden, more diffuse endothelial dysfunction, and a higher incidence of MB than women.