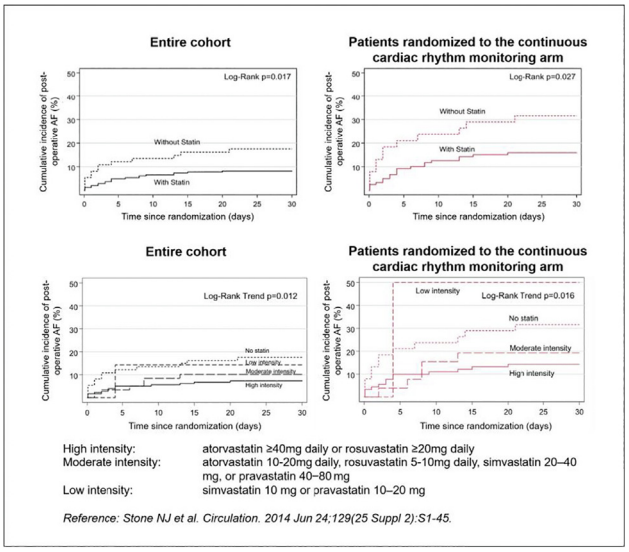
between the risk of post-operative AF in relation to statin use and dosing intensity (low, moderate, high) at the time of discharge. We excluded patients who experienced post-operative AF during hospitalization in this analysis. In the overall cohort (n=336), 260 (77.4%) patients were treated with statins at the time of hospital discharge. There were 18 (5.4%) patients who experienced post-operative AF during hospitalization. Patients prescribed with statins were more likely to be male (p=0.018), had lower CHA2DS2-VASc scores (p=0.011), and were more likely to undergo isolated coronary artery bypass grafting (CABG) (p=0.083). Patients treated with statins at discharge had a 2-fold lower rate of POAF than those who were not treated with statins in the overall cohort (17.6% vs. 8.2%, Log-Rank p=0.017) and in those randomized to continuous cardiac rhythm monitoring (31.6% vs. 16.0%, Log-Rank p=0.027) (Figure). After adjusting for surgery type (CABG vs. valve surgery) and the CHA2DS2-VASc score, statin use at discharge was associated with a lower risk of post-operative AF within 30 days after surgery (hazard ratio 0.48, 95% CI 0.24-0.97). Increased intensity of statin therapy was associated with lower risk of POAF (P=0.0012 for trend). (Figure)

CONCLUSION: High-intensity statin could reduce the risk of POAF among cardiac surgical patients with risk factors for stroke. This merits further study.



BMS/Pfizer Alliance, Boehringer Ingelheim Canada Ltd., Canadian Stroke Prevention Intervention Network (C-SPIN), Heart and Stroke Foundation of Canada, Medtronic

P042
THE NON-INVASIVE ASSESSMENT OF PERIPHERAL MICROVASCULAR AND ENDOTHELIAL FUNCTION IN WOMEN WITH NON-OBSTRUCTIVE CORONARY ARTERY DISEASE

S Hasan, L Pilote, M Friedrich, J White, M Pajevic, J Poole, T Anderson

Calgary, Alberta

BACKGROUND: Myocardial ischemia with non-obstructive coronary arteries (INOCA) is a disease disproportionately affecting women that is associated with a reduced quality of life and an increased risk of adverse cardiovascular events. Coronary microvascular and endothelial abnormalities are suspected to be the underlying causes of INOCA in the majority of patients. Currently, there is no widely accepted noninvasive test for diagnosing coronary microvascular and endothelial dysfunction in affected patients. To that end, recent evidence suggests microvascular function in the peripheral vascular circulation may correspond to coronary endothelial dysfunction. In this study, we tested the hypothesis that women with INOCA have attenuated peripheral microvascular and endothelial function compared to healthy controls.

METHODS AND RESULTS: We utilized three measures of peripheral arterial function, (1) flow-mediated dilation (FMD), (2) pulse arterial tonometry (PAT) and (3) velocity time integral (VTI), to understand the prevalence of microvascular and endothelial dysfunction in women with INOCA. Our study sample consisted of 32 perimenopausal women presenting with persisting chest pain and a diagnosis of INOCA following catheterization (mean age= 55 $\pm$ 6), and we compared them with 46 healthy age-matched healthy women (mean age= 51 $\pm$ 5). We found a significant difference in small-vessel endothelial function between the two groups as assessed by PAT, with patients demonstrating reduced function (RHI 2.08 $\pm$ 0.72 vs 2.54 $\pm$ 0.69, p=0.007) (Figure 1). This difference was statistically significant after correcting for confounders correlated with PAT, including age, body mass index, and hypertension (p=0.027). Small attenuations in brachial vasodilatory function as measured by FMD (Patients, 7.9 $\pm$ 3.9 vs controls, 9.3 $\pm$ 3.4, p=0.192) and in hyperemic flow velocity as measured by VTI (patients 109 $\pm$ 47m vs controls, 128 $\pm$ 42m/s, p=0.138) were not significant.

CONCLUSION: We demonstrated that patients with INOCA have significantly attenuated peripheral microvascular endothelial function compared to healthy controls as assessed by pulse arterial tonometry. Our findings suggest that peripheral and coronary microvascular dysfunction coincide and thus may reflect a systemic nature of vascular dysfunction in women with INOCA.