Coronary vasomotor disorders in ANOCA patients: insights from the CADOSA registry

S. La^1, R. Tavella^1, J. Wu^1, C. Zeitz^1, M. Arstall^2, A. Sinhal^3, M. Worthley^1, J. Beltrame^1

^1University of Adelaide, Adelaide, Australia
^2Lyell McEwin Hospital, Adelaide, Australia
^3Southern Adelaide Local Health Network, Adelaide, Australia

On behalf of Translational Vascular Function Research Collaborative, Basil Hetzel Institute, Adelaide, Australia

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Background: Patients with Angina and Non-Obstructive Coronary Arteries (ANOCA), require further investigation to elucidate the underlying cause of their symptoms (i.e. functional coronary angiography to assess the presence of coronary vasomotor disorders) but are frequently discharged with the non-diagnostic label of ‘unspecified chest pain’.

Purpose: To compare the 3-year clinical outcomes (mortality and readmission) in ANOCA patients with a ‘coronary vasomotor disorder’ diagnosis with those discharged with an ‘unspecified chest pain’ diagnosis.

Methodology: Using the CADOSA (Coronary Angiogram Database of South Australia) registry, consecutive patients undergoing coronary angiography between 2012-2018 were included. Among 8,932 symptomatic patients undergoing elective angiography, 2,245 were ANOCA (stenosis <50%) patients. Of this cohort, 170 (8%) had documented coronary vasomotor diagnosis (vasospastic angina 3% and microvascular angina 5%), and the remaining 2,075 (92%) were discharged with ‘unspecified chest pain’.

Results: In the overall ANOCA cohort (n=2,245, 61±11 years, 59% female) only 6% underwent functional coronary angiography. Compared to the unspecified chest pain cohort, those with a coronary vasomotor disorder diagnosis were (a) younger (61±11 vs 58±11, p<0.05), (b) more often to present to the emergency department with chest pain in the year prior to their coronary angiogram (19% vs 35%, p<0.05), (c) more likely prescribed anti-ischaemic medications at discharge (74% vs 88%, p<0.05), but (d) less likely to be discharged with cardioprotective medications (81% vs 73%, p<0.05). At 3-year follow-up, all-cause mortality was similar between those with coronary vasomotor diagnosis and those with unspecified chest pain (1% vs 2%, p>0.05), but those with a coronary vasomotor disorder were more likely to (i) present to the emergency department for chest pain (38% vs 16%) and (ii) be readmitted for chest pain (29% vs 10%), compared to those with unspecified chest pain, all p<0.05.

Conclusion: In this analysis of real-world practice, few ANOCA patients undergo functional angiography. Consequently, many ANOCA patients are discharged without thorough investigation to aid in appropriate diagnosis. Even when a diagnosis is made, ongoing symptom burden is severe. This study highlights the need to both appropriately investigate and identify patients at high risk for ongoing high symptom burden so treatment can be personalised to optimise management.