

Kavithra Karalasingham - University of Calgary

Project: Investigating the pathophysiology of chest pain and long-term heart health of patients with Postural Orthostatic Tachycardia Syndrome

Background:



My study focuses on Postural Orthostatic Tachycardia Syndrome (POTS), a condition that primarily affects young women. Patients with POTS experience a fast heart rate when standing. A common debilitating symptom of many patients with POTS is chest pain. However, patients often get told that their chest pain is “all in their heads.” Patients also have concerns of whether their fast heart rate and chest pain impacts their long-term heart health. Our study will aim to identify why patients with POTS have chest pain. We will use cardiac magnetic resonance imaging (CMR) in our study. With CMR, we can do a stress scan for the heart using a substance called adenosine. The scan will help find areas in the heart with reduced blood flow that might be causing the chest pain. The CMR scan will also use gadolinium, a contrast agent that makes scarring in the heart more visible. We will use this to check for heart damage or related structural issues. CMR

techniques will also determine if patients’ hearts are not pumping as well as they should when compared to healthy people of the same age and sex. Off-label prescriptions and lifestyle changes are currently used to manage symptoms, but these usually do not help with chest pains. It is important to understand the causes of chest pain in order to develop more targeted treatments for people with POTS. If we discover problems in the heart, patients with POTS may benefit from protective treatments to prevent further heart damage.

BIO

I am second-year PhD student in Cardiovascular and Respiratory Sciences. My research project looks at understanding the pathophysiology of chest pain in Postural Orthostatic Tachycardia Syndrome and the effect of chest pain on patients' quality of life. When I am not in the lab, I like to wind down by reading psychological thrillers and trying out new food places with friends!