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Title: Orthostatic Intolerance Syndromes following Hematopoietic Stem Cell Transplantation

Hematopoietic cell transplantation (HCT) is the treatment of choice for several cancers and involves chemotherapy to prepare the body to accept the new cells that populate the bone marrow. Improvement in techniques and treatments have prolonged the life of patients that have received HCT. At the same time, these long-term survivors are still at risk for developing treatment related complications. Orthostatic intolerance syndromes, including orthostatic hypotension (OH) and postural tachycardia syndrome (POTS), are characterized by dizziness, lightheadedness, loss of consciousness, weakness, blurred vision, fatigue, palpitations and headaches that can occur when going from a lying to standing position. Orthostatic intolerance syndromes have been strongly associated with an increased risk of cardiovascular disease, increased hospitalization, cognitive dysfunction, a reduced quality of life, and in general, an overall poorer prognosis in patients with preexisting diseases like diabetes mellitus and heart failure. A small retrospective study performed at Virginia Commonwealth University showed that approximately one third of patients that had received HCT and referred to cardiologists were because of orthostatic intolerance syndromes. The proposed study will evaluate patients before and after HCT to see how many patients have orthostatic intolerance before and how many developed it after HCT, and attempt to gain a better understanding of the mechanism(s) involved. The ultimate goal would be to identify patients at risk, those who develop these syndromes as early as possible,