Abstract No. **10**
Category: **Arrhythmias and Clinical EP**
Title: **Holter and Tilt Test Findings in Patients with Postural Orthostatic Tachycardia Syndrome**
Primary Author: **Mauricio Duque**

Abstract:

Background: Postural orthostatic tachycardia syndrome (STOP) is defined by an increase in heart rate (HR) É¥ 30 beats per minute (b.p.m.), usually É¥ 120 b.p.m. when going from supine to standing, in the absence of orthostatic hypotension (decrease of> 20 mmHg in systolic blood pressure), and is associated with symptoms such as blurred vision, tremor, generalized weakness, intolerance to exercise and fatigue, which deteriorate quality of life.

The objective is to describe the clinical and hemodynamic characteristics during the tilting test and 24-hour Holter parameters in patients with STOP.

Methods: A retrospective descriptive study, in patients with STOP who underwent a 24-hour Holter test and a til test during the years 2011 to 2017, at CES Cardiología Medellín, Colombia.

Results: We analyzed 22 patients, 15 (68.2%) women, the median age was 20 years (IR 9) and the average body mass index was 20.65 kg / m2 (SD 2.45). The most frequent symptoms were dizziness (54.5%), weakness (40.9%) and syncope (27.2%); with a duration of 15 days to 11 years.

The hemodynamic behavior during the tilting test was an increase in HR with a baseline average of 69 b.p.m. (SD 14.8) and a median maximum HR during the inclination phase of 127.5 b.p.m. (IR 43.4), with no decrease in blood pressure (116.8 / 74.8 (SD 15.9) to 117.4 / 83.5 (SD 16.6) mmHg), with a decrease in cardiac output (6.04 (SD 1.59) to 5.44 (SD 1.03) L / min) and increase in total peripheral resistance (1245.9 (SD 296.4) to 1464.6 (SD 273.2) dyn ÷ s ÷ cm-5). The syncope was present in 13 (59%), 12 of which were neurally mixed mediated syncope (type I) and 1 vasodepressor (Type III), in addition, one patient had a severe orthostatic intolerance that forced the study to end.

With respect to the Holter parameters, the HR average was 78.6 b.p.m. (SD 10.7), maximum HR (159.9 (SD 23.7), the variability of HR by SDNN was 179.4 (SD 37.1), pNN50 was 18.6 (SD 11.3), HF 617.1 (SD 351.4), LF 1229.6 (SD 523.3) and HF / LF 2.6 ratio (IR 1.6), the variability is preserved but an increase in sympathetic tone is observed. There were no clinically relevant arrhythmias and the average QTc was normal (440.6 SD 19.7).

Conclusion: STOP is a rare pathology that affects the quality of life, and many of the symptoms can be explained by a reduction in cardiac output with standing. There were no significant alterations in the Holter, however, an increased sympathetic tone is suggested, possibly compensatory.