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**Therapeutic Implications of Sympathetic Stimulus in Orthostatic Patients:
Measured by Spectral Domain Analysis**

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Background: Sympathetic Withdrawal (SW) can differentiate Orthostasis and with blood pressure (BP) and heart rate (HR), and fully define the continuum that is Orthostasis, including pre-clinical forms: Orthostatic Hypotension (OH-), Orthostatic Intolerance (OI), Orthostatic Hypertension (OH+), and Postural Orthostatic Tachycardia Syndrome (POTS). Our objective was to test the therapeutic implications of SW in Orthostatic patients. **Methods:** Autonomic profiling of 210 consecutive Orthostatic patients recruited from ambulatory clinics was performed using the ANX-3.0 Autonomic Monitoring System (Ansar, Inc., Philadelphia, PA). The cohort (age=58.9±11.6; 30 Diabetics; 132 Females, 28 Controls) was followed over a two year period. Autonomic profiling was based on patient responses to a standard clinical study that includes a resting baseline and periods of deep (relaxed) breathing, short Valsalva maneuvers, and quick stand immediately followed by quiet standing. The control group were patients with known diagnoses. The experimental group were prescribed 2.5 mg Midodrine once a day around dinner. Control patients were administered Flourinef, or support hose, or when possible were requested to modify their diets to add salt and build fluid volume. Patients with dysautonomia, with symptoms of elevated BP when supine were omitted from the study. **Results:** In 89% of the experimental cases, SW was reversed in approximately 6 months and weaned from the medication. The remaining cases were reversed and weaned before the end of the two year follow up. In the control group, 46% of the patients on Flourinef, 4% of the support hose patients and 12% of the diet modification patients corrected SW within the two year period. **Conclusions:** The application of an alpha-adrenergic agonist seems to have greater efficacy than a mineralocorticoid, mechanical intervention, or dietary modification in correcting SW associated with Orthostasis.