

DETERMINANTS OF ORTHOSTATIC HYPOTENSION IN DIALYSIS PATIENTS

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Objetives:

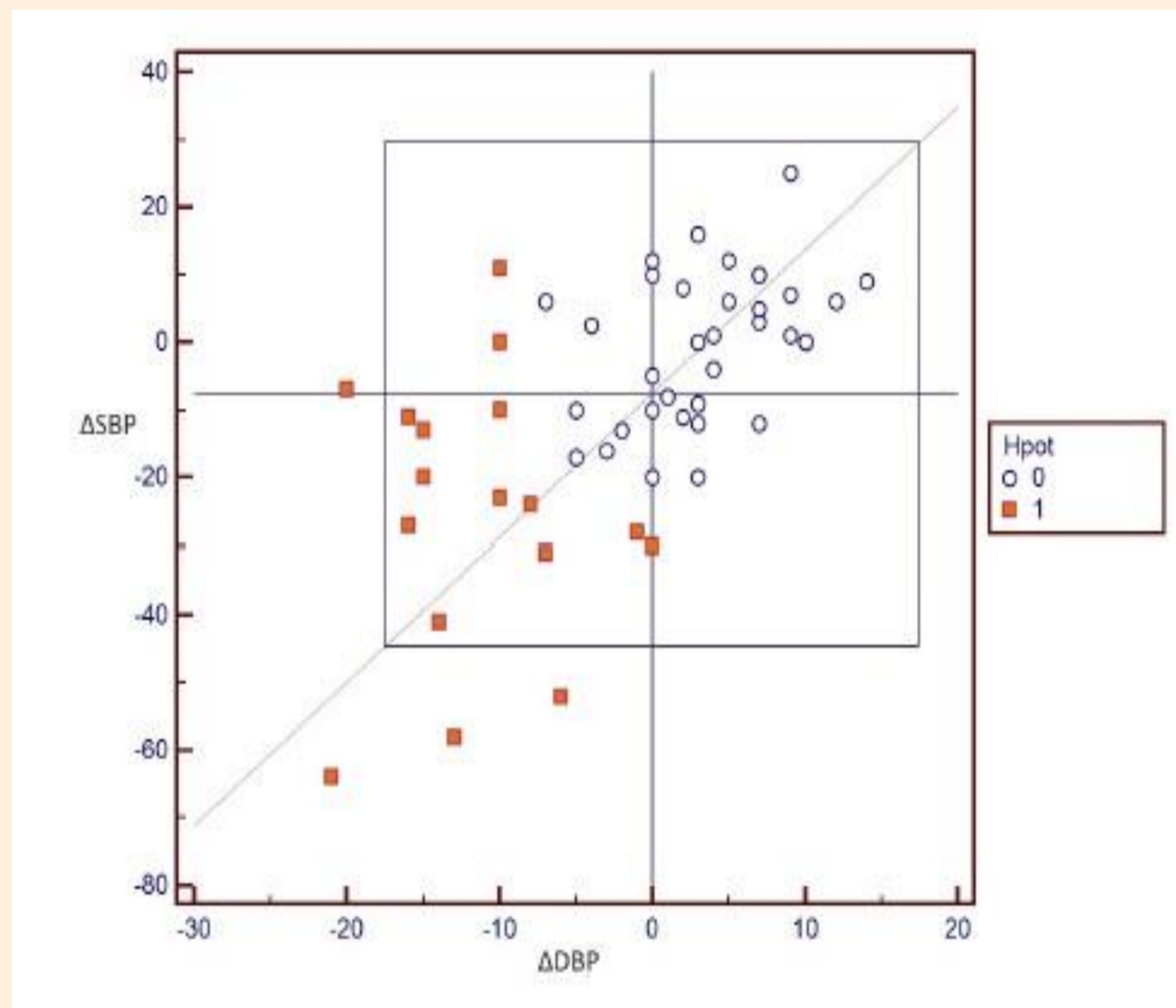
- 1-Analyze the prevalence of orthostatic hypotension in patients on dialysis.
- 2-To establish if orthostatic hypotension is associated with specific hemodynamic changes in supine position and standing.
- 3-Determine independent predictors of orthostatic hypotension

Design and Method

Within a cardiovascular evaluation program for patients in ESRD (PRECADIA), 68 patients attended the interdialysis day to undergo a hemodynamic evaluation. BP (Microlife) and hemodynamics was determined with impedance cardiography in supine position and after the third minute of standing. Following variables were analyzed: Systolic blood pressure (SBP), Diastolic blood pressure (DBP), heart rate (HR), stroke volume (SV), systemic vascular resistance index(SVRI) and thoracic fluid content (TFC). Patients were classified into 2 groups according to the presence (HIPOT) or not (EST) of orthostatic hypotension defined as a drop of 20mmHg or more of SBP and/or 10mmHg or more of DBP when standing. Hemodynamic variables were analyzed according to: 1-baseline conditions and 2-differences (Δ standing-lying) between the two groups (t-test and Mann-Whitney U test). Independent predictors of orthostatic hypotension were determined adjusting for age, sex, BP, anthropometric variables, time on dialysis and medication through a logistic regression

Results

We included 53 patients (age: 61.3 ± 14.85 years, SBP: 140 ± 33.49 mmHg, DBP: 79.64 ± 14.24 mmHg, females 28 (53.8%)). 12 patients (32.7%) had orthostatic hypotension. There were no significant differences in age, sex, BMI, time on dialysis, diabetes prevalence and CV events between both groups. 92,31% of the HYPOT group received BB, the EST group only reached 50% ($p = 0.0303$). In supine position, there were no hemodynamic differences between the two groups. By standing the HYPOT group showed lower Δ SVRI ($p = 0.026$), Δ DBP($p < 0.0001$) and Δ SBP ($p < 0.0001$). There were no significant differences in Δ TFC. **In logistic regression, the use of BB was an independent variable for orthostatic hypotension**



Conclusions

The use of BB was a determinant factor to attenuate or to nullify the compensatory increase of the vascular resistances by standing, and consequently to favor the development of hypotension when standing. It should be evaluated whether or not this phenomenon is associated with a higher rate of events, and if this measurement adds value when deciding whether to use BB in this population.