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Service (sector) Epidemiology N° CEP

### **Orthostatic Hypotension in long term type 1 diabetic population of the Wisconsin Epidemiologic Study of Diabetic Retinopathy (WESDR)**

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**Purpose:** The purpose of this study is to analyze the prevalence of Orthostatic Hypotension (OH) and factors associated to this condition in a long term type 1 diabetic population. **Methods:** A cross-sectional analysis of the population-based study identified in the Wisconsin Epidemiological Study of Diabetic Retinopathy (WESDR) was performed. All participants were submitted to clinical examinations that included blood pressure measurements in supine and standing positions, electrocardiography (ECG), and complete ophthalmic examination. Questionnaires were administered to all participants. Blood samples were provided for biochemical analysis. Orthostatic hypotension was defined as reduction of systolic blood pressure equal or greater than 20 mmHg or reduction of diastolic blood pressure equal or greater than 10 mmHg. Univariate analysis was performed using t-test for continuous variables and chi-square for categorical variables. Logistic regression was performed in multivariate analysis to control for confounders. P-values less than 0.05 were considered significant. **Results:** A total of 440 people was included and 71 (16.14%) presented OH. The mean ( $\pm$  SD) age of people with OH was  $49.54 \pm 11.14$  and for people without OH was  $44.64 \pm 9.60$  ( $p < 0.01$ ). ECG readings showed that people with orthostatic hypotension presented signs of cardiac autonomic dysfunction. In multivariate analysis, people with age  $\geq 50$  years compared to  $< 40$  years presented 2.75 times more chance of developing OH ( $p < 0.05$ ). Diabetic retinopathy (DR) was not related to OH in this population; OR (95%CI) = 1.02 (0.38-2.78) comparing people with moderate-severe DR to no-mild DR and OR (95%CI) = 1.81 (0.86-3.80) when comparing proliferative DR to no-mild DR. **Conclusions:** Orthostatic hypotension is a common finding in diabetic people. Autonomic dysfunction may play an important role in the development of this condition in this population. Older people have a higher chance of presenting OH compared to a younger group.