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USEFULNESS OF REPEATED OFFICE BLOOD PRESSURE MEASUREMENTS TO DISCLOSE WHITE COAT HYPERTENSION
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White coat hypertension can be defined as an elevated clinic blood pressure (BP) in association with normal ambulatory (A) or home (H) BP. However, to identify white-coat hypertension, the use of ABP monitoring is still limited by its cost and the discomfort that can generate while not all patients are candidate for HBP monitoring (i.e. anxious, compliant and unreliable subjects). Aim of the present study was to assess whether repeated office blood pressure (ROBP) measurements were able to discriminate white-coat from sustained hypertension.

One hundred and twenty-two patients (mean age: 58 ± 19.67 females), referred to our unit by their general practitioner for an ABP monitoring (with the main indication of confirming the clinical diagnosis of hypertension), were considered for the analysis. After 20-minute resting, shortly before ABP device (A and D TM2430) attachment, patients underwent ROBP measurements by automated oscillometric device (A and D TM2541), set to obtain 10 readings at 2.5-minute intervals. The average of the last 6 valid measurements obtained with ROBP was compared with the average daytime (hr. 8-22) ABP values.

Eighty-one, out of the 122 patients considered, showed ABP pattern compatible with sustained hypertension (daytime BP > 130/80 mmHg) while 41 presented with ‘normal’ ABP values suggesting white coat hypertension. ROBP measurements predicted the white coat phenomenon in all but one the subjects. The average of the 6th-to-10th values (122 ± 7 mmHg) practically overlapped daytime ABP values (121 ± 4 mmHg) in those patients and the correlation was high and significant (systolic r: 0.84, p<0.0001, diastolic r: 0.96, p<0.0001). In the group of patients in whom daytime ABP values indicated sustained hypertension, also ROBP values resulted higher than ‘normal’ values (mean ROBP values: 147/85 ± 12/7 mmHg, mean daytime ABP values: 146/85 ± 11/8 mmHg) and a good correlation with daytime ABP mean values was found (systolic r: 0.81, p<0.0001, diastolic r: 0.91, p<0.0001).

In conclusion, our data indicate that ROBP measurements, performed under standardized conditions, may be helpful for the diagnosis of white coat hypertension. Also in patients with sustained hypertension a very good correlation between morning ROBP measurement and mean daytime ABP values was found, indicating that, in dipper patients at least, ROBP measurements represent a reliable tool for making treatment decision.

Key Words: Repeated Office Blood Pressure Measurement, Ambulatory Blood Pressure Monitoring, White-Coat Phenomenon

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INTERACTION BETWEEN GLYCERYL TRINITRATE AND SILDENAFIL CITRATE (VIAGRA®) MAY LAST LESS THAN 4 HOURS
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Sildenafil citrate (VIAGRA®) is a potent inhibitor of cGMP-dependent phosphodiesterase type 5 (PDE5) for the treatment of erectile dysfunction. The presence of PDE5 in the vasculature results in a pharmacodynamic interaction of sildenafil with nitric oxide donor drugs, such as glyceryl trinitrate (GTN). Thus, coadministration of nitrates and sildenafl within 24 hours of each other is contraindicated. The purpose of this study was to examine the duration of hemodynamic interaction between sildenafil and a nitrate. This was a double-blind, randomized, 2-way crossover study in 33 healthy male volunteers that measured the hemodynamic effects of sublingual GTN spray (0.4 mg) administered at multiple time points (1–48 hours) following an oral 100-mg dose of sildenafil or placebo. The effects of sildenafil plus GTN on sitting blood pressure (BP) were significantly greater than those of placebo plus GTN at 1 hour with no statistically significant interaction at other time points. Statistically significant differences in sitting heart rate seen at 1, 6, and 24 hours after sildenafil were small and not clinically meaningful. The degree of hemodynamic interaction corresponded with plasma sildenafil concentrations, which were maximal 1 hour after dosing. The overall incidence of treatment-related adverse events was low, with the highest incidence occurring at the 1-hour time point. In conclusion, during the 48-hour period following a 100-mg dose of sildenafil, concomitant GTN administration produced a significantly greater decrease in BP compared to administration with placebo, only at the 1-hour time point. Thus, in healthy volunteers, the hemodynamic interaction between sildenafil and nitrates lasted <4 hours.

Key Words: Sildenafil Citrate, Nitrates, Pharmacokinetics

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ABSENCE OF RELATIONSHIP BETWEEN NON-DIPPING STATUS AND PLASMA LEVELS OF INFLAMMATORY MARKERS IN PATIENTS WITH UNTREATED ESSENTIAL HYPERTENSION
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Low-grade inflammation and abnormal circadian blood pressure (BP) variation are related with augmented risk of cardiovascular complications. The aim of the study was to determine whether there is an association between the diurnal BP fluctuations and plasma concentrations of inflammatory markers, in essential hypertensive subjects.

Towards this end, 62 newly diagnosed untreated patients with stage I to II essential hypertension (40 men, mean age=48 years, office BP=144±95 mmHg) underwent ambulatory BP monitoring and were classified as dippers and non-dippers according to the diurnal variation of 10% between mean daytime and night-time systolic and diastolic BP. In all participants, plasma concentrations of C-reactive protein (CRP), serum amyloid A (SAA), macrophage chemiotactant protein-1 (MCP-1), tumor necrosis factor (TNF)-alpha and myeloperoxidase (MPO), were assessed.

In the entire population, body mass index was 28.2±4 kg/m2, left ventricular mass index was 99.5±23 g/m2, left atrial dimension was 3.58±0.5 cm, intraventricular septum thickness was 1.0±0.13 cm, total cholesterol was 223.6±44 mg/dl, triglycerides were 136±38 mg/dl and low-density lipoprotein was 143±38 mg/dl. Regarding the inflammatory markers, CRP, SAA, TNF-alpha, MCP-1 and MPO levels were 2.9±2.0 mg/l, 6.05±6.6 mg/l, 7.3±2.7 pg/ml, 146.6±29 pg/ml and 0.48±0.02 U/ml, respectively. Non-dippers (18 subjects) and dippers (44 subjects) did not differ regarding plasma CRP, SAA, TNF-alpha, MCP-1 and MPO levels (p=NS). Additionally, non-dippers had significantly greater 24-h systolic BP (by 8 mmHg, p<0.05), night-time systolic and diastolic BP (by 21 and 13 mmHg, respectively; p<0.05), ambulatory pulse pressure (by 5.1 mmHg, p<0.05) and higher total cholesterol levels (by 26 mg/dl, 0<0.05), compared to dippers. Furthermore, there was no difference between the two study subgroups regarding left atrial dimension, left ventricular mass index and intraventricular septum thickness (p=NS).

In conclusion, the adverse cardiovascular outcome associated with non-dipping status, seems to be irrelevant to inflammatory processes, in