

Methods The study was prospective and observational. We screened all consecutive patients managed in our tertiary health-care center for resistant hypertension between January 2014 and December 2017. Were included only those who already had an ambulatory blood pressure measurement (ABP) to exclude a white coat effect and a thorough etiological work up to exclude a secondary cause. Hypertension was considered resistant if the daytime ABP was over or equal to 135/85 mmHg and/or the 24-hours ABP was over or equal to 130/80 mmHg, under 4 antihypertensive medications combining a renin-angiotensin system inhibitor, amlodipine, a thiazide (or indapamide) and spironolactone, at optimal doses. Adherence to treatment was assessed by the eight-item Morisky Medication Adherence Scale (MMAS-8).

Results Three hundred eighty-six patients were enrolled, with a mean age of 57.4 ± 11.3 years, 48.3% of men. The mean office blood pressure was $178 \pm 20.4/101 \pm 15.5$ mmHg and the 24-hours ABP was $164 \pm 17.6/97 \pm 15.2$ mmHg. The proportions of high, medium and low adherence were 27.9%, 47.6% and 24.5% respectively. Fully adherent, partially non-adherent and completely non-adherent patients differed significantly in terms of proportions of women (25%, 48% and 72%), number of daily drugs, reflecting comorbidities (5.9; 6.1, and 9.8 respectively) and education level (the proportions of patients who did not achieve a secondary school were 10.1%, 28.3% et 53.2% respectively).

Conclusions In our study, more than two out of three patients with apparent resistant hypertension optimally treated and without white coat effect, were partially or completely non-adherent to treatment. Assessment of treatment adherence in these high cardiovascular risk patients should be systematically implemented and if possible by more objective methods.

Disclosure of interest The authors declare that they have no competing interest.

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Ambulatory blood pressure monitoring after one major cardiovascular event to predict a second one

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Objectives To compare ambulatory blood pressure (ABP) values after a first major cardiovascular event, between patients with and without a second event, and to evaluate if ABP measurements could have a role in the prediction of a second event occurrence.

Methods We included 368 hypertensive patients who had ABP measurements after a first major cardiovascular event (acute coronary syndrome or stroke), with a mean age of 69.9 ± 11.8 years, 62.5% of men. One hundred and three patients had a second event during a mean follow-up of 2.8 ± 1.6 years.

Results Twenty-four-hours systolic blood pressure (SBP) values were 135 ± 15 mm Hg in patients with a second event versus 126 ± 13 mm Hg in those with one event ($P=0.002$). Daytime SBP was 139 ± 14 mm Hg and 129 ± 13 mm Hg respectively ($P=0.002$). Night-time SBP was 129 ± 17 mm Hg and 118 ± 16 mm Hg respectively ($P=0.003$). Using Cox model with adjustments for age, sex and systolic office blood pressure, all the three measures: 24 hours SBP (HR: 1.032; CI 95%: 1.005–1.060), Daytime SBP (HR: 1.026; CI 95%: 1.00–1.052) and Night-time SBP (HR: 1.031; CI 95%: 1.007–1.055) significantly associated with a recurrence of a second event. In the 24-hours systolic blood pressure ROC curve analysis, a value of 125 mm Hg was the best cutoff for prediction of a second event, with a sensitivity of 83%.

Conclusion In our population of hypertensive patients with a previous cardiovascular event, higher values of 24 hours, daytime and night-time SBP were predictive of a second event occurrence.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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Lifestyle advice follow-up improves dietary consumption and cardiometabolic risk in type 2 diabetes patients treated with oral antidiabetics

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Background and aim of the study The lifestyle intervention is one of the most effective therapeutic options for improving glycemic control and reducing cardiovascular risk factors in patients with type 2 diabetes (T2D). The aim of this study was to investigate if monitoring of lifestyle advices could improve glycemic control and atheroma ratios in T2D patients treated with oral anti diabetics (OAD).

Methods Patients ($n=85$, sex ratio F/M, 40/45) aged 50 ± 8 years, with T2D since 9 ± 3 years and initially treated with oral anti diabetics during 8 ± 1 years, were recruited. At the beginning of the study (d0), nutritional advices (i.e. consumption of fish, fruits and vegetables diet, with 250 g of carbohydrates distributed over daily different meals) associated to 30 to 45 min walking per day, were recommended, with a follow-up at 3 (d90) and 6 months (d180). The 24-hour recall, followed by a 3-days record, and daily energy expenditure (DEE) questionnaire were realized. Serum glucose and glycated hemoglobin (HbA_{1c}) were measured. Serum insulin was determined by ELISA and homeostatic model assessment insulin resistance (HOMA-IR) index was calculated. Serum total cholesterol (TC), HDL-C and triglycerides (TG) levels were measured by enzymatic colorimetric tests. Apolipoproteins Apo A-1 and Apo B level were analyzed by immuno-turbidimetric test.

Results A significant increase of total energy intake (TEI) (MJ/24h) was noted in T2D, at d90 and d180, compared to d0 ($P<0.05$). A negative balance (TEI-EE) was noted at d0 (-0.75 MJ), and d90 (-1.42 MJ/24 h) of lifestyle advices follow-up, whereas, a positive balance ($+0.42$ MJ/24 h) was observed at d180. There was no significant difference in carbohydrate intake distribution between the different meals, over the time. Compared to d0, serum glucose concentration, and HbA_{1c} value were reduced respectively by 19% and 35% at d90, and by 12% and 14%, at d180. Plasma insulin and HOMA-IR remained unchanged. Serum TG concentrations decreased by 36% at d90 vs. d0, and serum TC levels were lowered by 16% and 26%, at d90 and d180 respectively compared to d0. TC/HDL-C and Apo A-I/ApoB100 ratios were respectively reduced by 32% and 49% at d90, and by 57% and 68%, at d180 compared with d0.

Conclusion The six-month follow-up of dietary advice, associated with regular physical activity by T2D patients, improves their food consumption, HbA_{1c} as well as atheroma risk.

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