P3-286  Alterations in ambulatory blood pressure in adolescents with obesity.

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INTRODUCTION.

Obesity is associated with comorbidities such as hypertension (HTN), and other alterations in blood pressure (BP) such as: masked hypertension and alterations in the circadian cycle variability, that only can be detect through ambulatory blood pressure monitoring (ABPM).

A higher prevalence of masked hypertension has been reported in obese subjects, up to 4.3%. Also a loss in drop from mean daytime to mean night-time levels in up to 50%, conditions that only can be detected by ABPM.

OBJECTIVE.

Identify the alterations in ambulatory blood pressure in Mexican obese adolescents.

Evaluate the correlation in blood pressure measurement between ABPM and casual blood pressure.

METHODS.

This was a cross-sectional study of adolescents aged 12-17.9 years recruited at their first visit to any of two participating Childhood Obesity Clinics in Mexico City. We carried a medical and nutritional evaluation, anthropometry, biochemistry analysis (fasting glucose, lipid profile, insulin and renal function) and measurement of casual BP by osimilicrom. After that, the monitor was placed in the subjects for 24 hours ABPM records.

RESULTS.

Thirty subjects were measured, of which 66% are women, with BMI values between 26.5 and 35.14 kg/m2; with a median age of 15 years. Shown in Table 1.

The biochemical results were reported as median, glomerular filtration rate 101.31ml/min1.73, glucose 83mg/dl, total cholesterol 145mg/dl, triglycerides 107mg/dl, and uric acid 6.1mg / dl. 37% had hypertriglyceridemia, 7% hypercholesterolemia and 97% had central obesity.

The frequency of ABPM alterations were: 22% of men and 21% of women had systolic HTN of 24hrs; 11% of men and 26% of women had diastolic HTN of 24hrs; 22% of men and 21% of women with systolic-day HTN, 11% of men and 16% of women with diastolic-day HTN; while for systolic-nocturnal HTN, 33% of men and 32% of women presented it. Diastolic-night HTN in men was 44% and 53% in women. The most frequent alteration was nocturnal diastolic HTN. Plot 1

The no dipping in BP was present in 50% of the subjects, with systolic predominance; the diastolic was in 33% of the subjects.

The main alterations of the TA were documented during the night. One patient presented the seven alterations of ABPM. Loads greater than 50% were observed in 13 patients (43%) that imply severe ambulatory HTN.

CONCLUSIONS.

The 70% of adolescents with obesity presented some alteration in ABPM, with a predominance of nocturnal HTN and the absence of dipping. It is important to consider measure ABPM as part of the assessment of adolescents with obesity, as well as to evaluate the comorbidities related to this alteration, such as hypertrophy of the left ventricle.

Acknowledgments.

To their participants and their families.