



## LETTER TO THE EDITOR

### Prevalence of hypertension in Portuguese adolescents

### Prevalência de hipertensão em adolescentes portugueses

Dear Editor,

We read the article "Prevalence of hypertension in Portuguese adolescents in Lisbon, Portugal" by Silva et al.<sup>1</sup> with interest. They investigated the prevalence of pre-hypertension and hypertension (HT) in Portuguese adolescents in Lisbon to ascertain the relationship between blood pressure (BP) levels and the risk factors of gender, obesity, smoking, alcohol consumption, exercise and family history of HT. They demonstrated a high prevalence of pre-hypertension and hypertension; hypertension was more prevalent in boys and pre-hypertension was more prevalent in girls. The results of this study should help to alert society and the medical community to the current problem of hypertension in adolescents.

HT is a major risk factor for stroke (ischemic and hemorrhagic), myocardial infarction, heart failure, chronic kidney disease, peripheral vascular disease, cognitive decline and premature death. HT is thus one of the most preventable causes of premature morbidity and mortality world-wide.<sup>2</sup> Hypertension is highly prevalent in Portugal. The percentages of hypertensives who are aware of their condition, are being treated, and whose hypertension is controlled are unacceptably low.<sup>3</sup> The clinical concepts of BP and hypertension in children and adolescents have changed significantly.<sup>4</sup> Cardiovascular disease is the leading cause of death and hypertension is one of the main risk factors, although often underdiagnosed or poorly controlled.<sup>5</sup>

Firstly, prevalence studies: the patients included in the study should be representative of the entire target population. It would have contributed to the study if schools in other regions of the city (Lisbon) had been included.

Secondly, the authors chose the method of BP measurement that was recommended in the Fourth Report on the Diagnosis, Evaluation, and Treatment of High Blood Pressure in Children and Adolescents (2005). With that guidance only right arm BPs were measured, whereas blood pressure may be different between the two arms and this could affect the results of the study. So, we think it would be better if BP were measured in both arms, the measurement were

repeated (with at least 10-minute intervals) in the arm that has higher BP and the average of them were noted.

In addition, some factors (e.g. diabetes mellitus, hypercholesterolemia, lower socioeconomic status, urban living and stress) may affect HT.<sup>6</sup> It would be useful if the authors provided data about these risk factors and their possible relationship with HT.

Finally, secondary hypertension should be considered in patients with early onset of hypertension. Furthermore, the authors should explain the baseline of laboratory parameters and they have to exclude secondary hypertension. We believe that these findings will provide useful information about HT.

### Conflicts of interest

The authors have no conflicts of interest to declare.

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