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Jornal de Pediatria

Importance of assessing all components of the metabolic syndrome in adolescents

Dear Editor,

The study carried out by Rodrigues et al.,[1] recently published in this respected journal, aimed to evaluate the occurrence of metabolic syndrome and the association between risk factors in adolescents. We read the article with interest, since prevalence studies on metabolic syndrome in this age group among Brazilians are scarce, as reported in a recent review.[2] However, we have observed some inaccurate results concerning metabolic syndrome components, misinterpretation or inadequacy of cited references, as well as inadequate statistical analysis to determine the association between risk factors.

In relation to components, the authors have not assessed the prevalence of abdominal obesity, which, according to the criterion recommended by the Brazilian Society of Cardiology,[3] should be included in the criteria for diagnosis of the syndrome, based on the criteria of the National Cholesterol Education Program - Adult Treatment Panel III (NCEP-ATP III). On the other hand, this component is also quite controversial regarding cutoff points in adolescents, and Cook et al.[4] adapted NCEP-ATP III criteria and proposed that abdominal obesity should be defined as values greater than or equal to the 90th percentile. Thus, we consider that abdominal obesity is an important component to be evaluated in the diagnosis of metabolic syndrome because it is directly related to increased blood pressure and changes in the lipid profile.[5]

We have analyzed the references cited by the authors and verified two primary inaccuracies. The first one occurred when the authors stated that "we adopted the values suggested and adjusted for this age group in another study."[6] We have verified that this reference approaches only criteria for diagnosis of one of the components of the metabolic syndrome, blood pressure. For that purpose, we suggest that the authors, in future studies, use as diagnostic criteria the cutoff points adapted by Cook et al.,[4] which have been widely accepted in the scientific community. The second aspect is concerned with the citation of the adopted criterion; after a search for the journal volume on *Revista Brasileira de Hipertensão*, we could not find the article as therein referenced.

At last, in the manuscript title, the authors propose an analysis of possible associations between risk factors and metabolic syndrome. However, we have not found these analyses in the results; we could only observe a description of the components, regarding continuous data and prevalence of each one of them according to sex. For that purpose, the literature shows some indicators of associations in cross-sectional studies,[7] such as odds ratio and prevalence ratio, in which it is possible to analyze the probability of outcome occurrence according to the presence or absence of exposure.

In summary, we consider this study an important contribution to the scientific community, since it is one of the few investigations on Brazilian adolescents. We point out that our comments do not affect the value of this study and we do hope that we have contributed toward a better understanding of the data reported.

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