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Letter to Editor

Why Haven't We Been Able to Reduce the Prevalence of Obesity?

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To the Editor

This editorial is dedicated to the doctors, collaborators, and the educational unit Liceo Panamericano de Guayaquil from the IN.PE.TU program, who have trusted in an academic concern that is relevant, significant, and opens possibilities for research, analysis, and resolution with the following questions:

1. Does Metabolic Syndrome exist in childhood?
2. What are the parameters that clinically raise suspicion of it in children, and from what age?
3. How can we quantify its prevalence?
4. We still need to carry out the external validation of this proposal and understand its distribution by geographical area.

After a critical analysis of this objective, we have conducted a series of cross-sectional studies, allowing us to develop a proposal that aims to be innovative, reproducible, and cost-effective, to study the risk factors that lead to the presentation of metabolic syndrome in children from an early age, from puberty [1], which paves the way for the presence of Diabetes Mellitus in adulthood. This strategy requires: 1. a measuring tape, 2. a blood pressure monitor with a pediatric cuff, 3. a pencil. It is a simple and cost-effective triage that can be applied by paramedical personnel or educators in any geographical area.

It is suggested to screen, at the population level, children over 12 years old who are 1. sedentary for more than 3 hours in front of a computer screen, iPad, TV, or phone, 2. Those whose waist-to-height ratio is higher than 0.50 (in Guayaquil, it's 0.46. Each geographic area will have its cutoff point), and 3. whose brachial blood pressure measurement is above the 90th percentile in 3 consecutive readings. Thanks to Artificial Intelligence, these 3 indicators are mathematically sensitive in detecting Metabolic Syndrome with laboratory parameters. [2]

A prevalence of 33.9% of metabolic syndrome was observed in school children from 6 to 15 years old, with pathological cut-off points of: WHtR > 0.46, weight > 56.1 kg, pure sedentary lifestyle > 3 hours in front of the screen/playing video games, and SBP within the 90th percentile (> 123 mmHg). With these indicators, we can predict a probability of early diagnosis of metabolic syndrome of 97% to 100%. [3]

In conclusion

This proposal presents a feasible, innovative and cost-effective approach that, if validated, will be a promising alternative to determine the prevalence of metabolic syndrome in childhood. With this tool, implementing coordinated nutritional programs with sports might be applicable in early age. This could change the course of the history of Obesity and promote a healthier and more resilient society.

This proposal requires external validation to confirm it in other populations.

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