WHAT DO LIPIDS TELL US ABOUT THE PANDEMIC?

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INTRODUCTION

The pandemic has changed habits in families around the world. Eating habits and physical activity were directly impacted by social distance. The first year of the pandemic left its mark on children's health.

The purpose of this analysis was to evaluate the relationship between the first year of the pandemic and the serum lipid profile in children who underwent lab tests in a private laboratory in Curitiba-PR, Brazil.

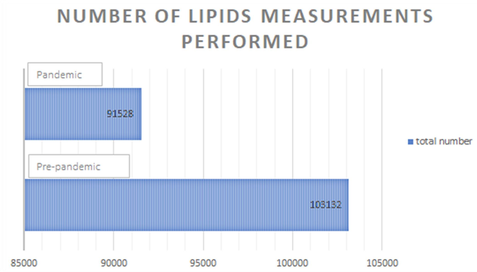
RESULTS

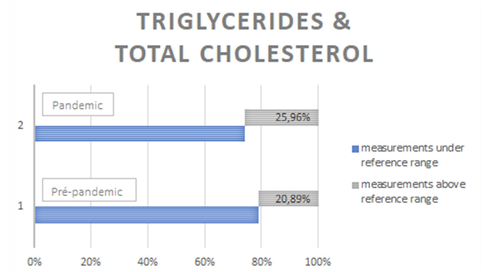
There was a reduction of 14.41% in the number of lipids measurements performed in the pre-pandemic x pandemic period.

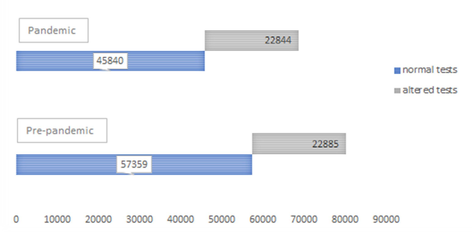
The percentage of altered tests was higher in the pandemic sample, corresponding to 33.26% against 28.52% in the pre-pandemic.

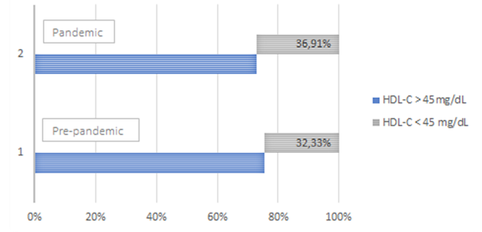
Assessing TC and TG, highlighting its greater link with eating habits, we observed that in the first period there were 32.33% of measurements above the reference range and now they are 36.91%.

Regarding HDL-c, relating it to physical activity, data indicates 20.89% below 45 mg/dL in the 2019-2020, evolving to 25.96% in 2020-2021.









METHOD

Observational and retrospective, serum levels of triglycerides (TG), total cholesterol (TC) and HDL cholesterol (HDL-c) were assessed in 36,658 patients aged 0 to 19 years old, in the period from April/2019 to March/2020 (pre-pandemic) and April/2020 to March/2021 (pandemic), which may have performed a complete or partial lipid profile, once or in more than one opportunity during these 24 months, totaling 148,927 tests.

The population sample has 54.8% girls and 45.2% boys, distributed in two age groups, from 0 to 9 years old (block 1) and from 10 to 19 years old (block 2) for the purposes of normal reference values.

TC values <170 mg/dL, HDL> 45 mg/dL and TG <85 mg/dL (group1) or <100 mg/dL (group 2) were considered normal

CONCLUSIONS

Lipids are telling us a worrying story.

We have some biases that cannot be ignored and that are part of the clinical history of each child. We do not have clinical data for this assessment.

From the perspective of laboratory measurements, there was an increasing rate of dyslipidemia in the pediatric population evaluated and a worsening of the HDL-c profile, suggesting a measurable impact of the reduction in physical activity during the pandemic period.

Further analysis is needed to legitimize this trend as a fact as well as for the solid structuring of the cause-effect relationship.