

MODIFICATION OF CARDIOVASCULAR RISK FACTORS IN CHILDREN TREATED WITH GROWTH HORMONE.

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OBJECTIVES

The administration of Growth Hormone on pediatric patients to optimize the longitudinal growth, can modify some cardiovascular risk factors due to their effects on metabolism. Evaluation of the effect of GH on total cholesterol blood levels (TCBL), fasting blood glucose concentration (FBGC), blood pressure (BP) and BMI, comparing these variables before starting treatment, after a year and at the end. And it also assesses whether there are differences according to sex, duration and the treatment indication.

METHODS

Retrospective longitudinal observational study. Includes 72 patients treated with GH. The group comparison is performed using Chi-square test for categorical variables and Mann Whitney U for continuous variables. Comparison of changes in BMI, glucose, cholesterol and BP from baseline to a year and to the end of treatment was performed with the Wilcoxon W test.

RESULTS

- TCBL descends after a year of treatment ($p=0.03$) and at the end ($p=0.01$).
- FBGC increases after a year of treatment ($p=0.001$); but the difference is not significant between the start and the end of treatment.
- BMI decreases after a year of treatment ($p=0.007$) and at the end ($p=0.007$).
- No differences were found in Systolic BP or Diastolic BP, between different moments of treatment.
- No differences were observed in any of the analysed variables according to sex or treatment indication at any time.
- At a longer duration of treatment the decrease of BMI is greater ($p=0.069$) and also rises the decrease of TCBL ($p=0.072$); but the duration of treatment has not resulted in a greater increase in FBGC.

CONCLUSIONS

GH in children improves BMI and TCBL; these changes increase as the treatment duration is longer, due to the lipolytic effect. There are also elevation of FBGC but only during the first year of treatment. There are no changes in BP.

References

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