IMPACT OF WEIGHT LOSS ON GONADIC FUNCTION IN OBESE BOYS

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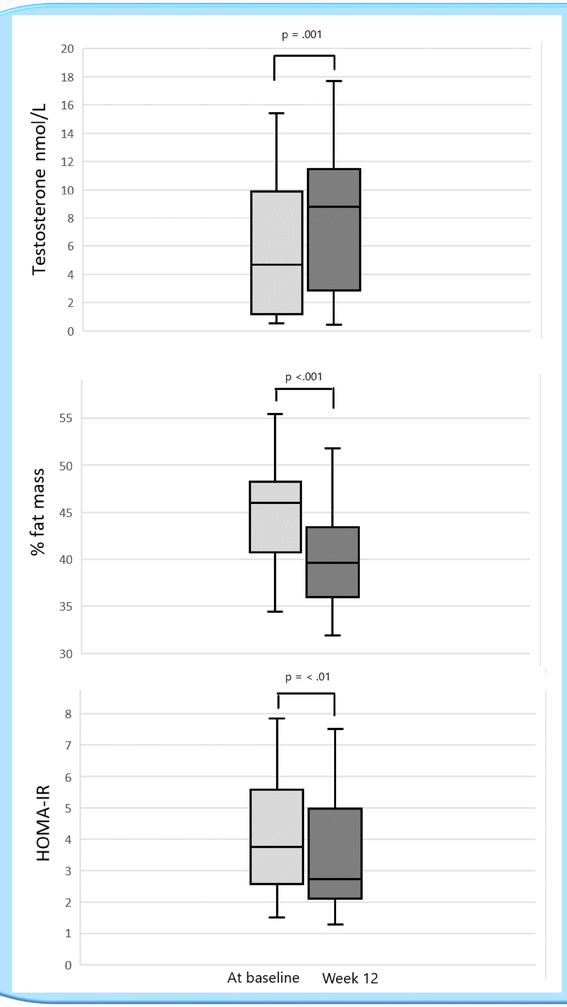
Introduction :

- Alteration of Sertoli and Leydig cell functions in obese boys have been described
- reversibility after weight loss during childhood ?

Objective = evaluate the impact of weight loss on gonadic function in obese boys

Research design and methods :

- 34 obese boys aged 10 to 18
- Participation between 2012 and 2020 in a 12-weeks therapeutic educational program.
- Evaluation at baseline and at week 12 :
    - physical examination,
    - DEXA for body composition,
    - metabolic and hormonal measurements.



Results

Significant decrease at week 12 :

- Weight
- Body Mass Index (BMI)
- Percentage of fat mass
- Fasting insulin
- Homeostasis model assessment of insulin resistance (HOMA-IR)

Significant increase in median testosterone levels at week 12

No difference in median inhibin B, AMH, FSH, LH and estradiol levels after weight reduction.

Increase in testosterone levels correlates with the amount of fat mass loss (r=-0.39) only.

Conclusion : **Alteration of Leydig cell function may be reversible after weight loss in obese children, while no change was found in Sertoli cell function. Increase in testosterone levels may be linked to fat mass loss.**

References :
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