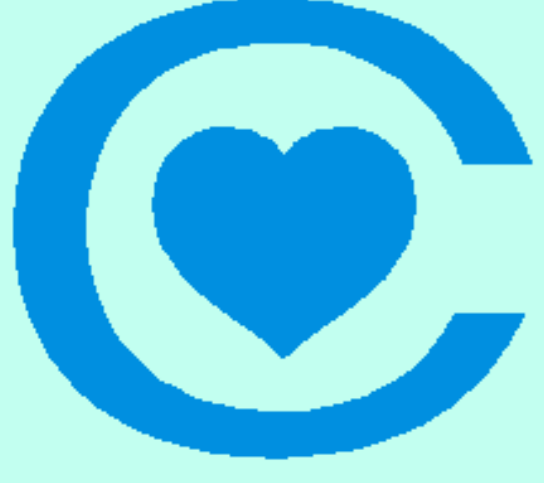


# ESTIMATION OF ADIPSIN, OMENTIN AND VASPIN CONCENTRATION IN PREPUBERTAL CHILDREN WITH GROWTH HORMONE DEFICIENCY BEFORE AND AFTER 6 MONTHS OF GROWTH HORMONE TREATMENT



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## Background and Aim

Growth hormone deficiency (GHD) is usually associated with excess of abdominal fat tissue and increased risk of developing cardiovascular diseases. Adipose tissue produces different adipocytokines that could explain the relationship between excess of fat tissue and increased metabolic risk. Adipsin, omentin and vaspin are adipocytokines which are still not well examined.

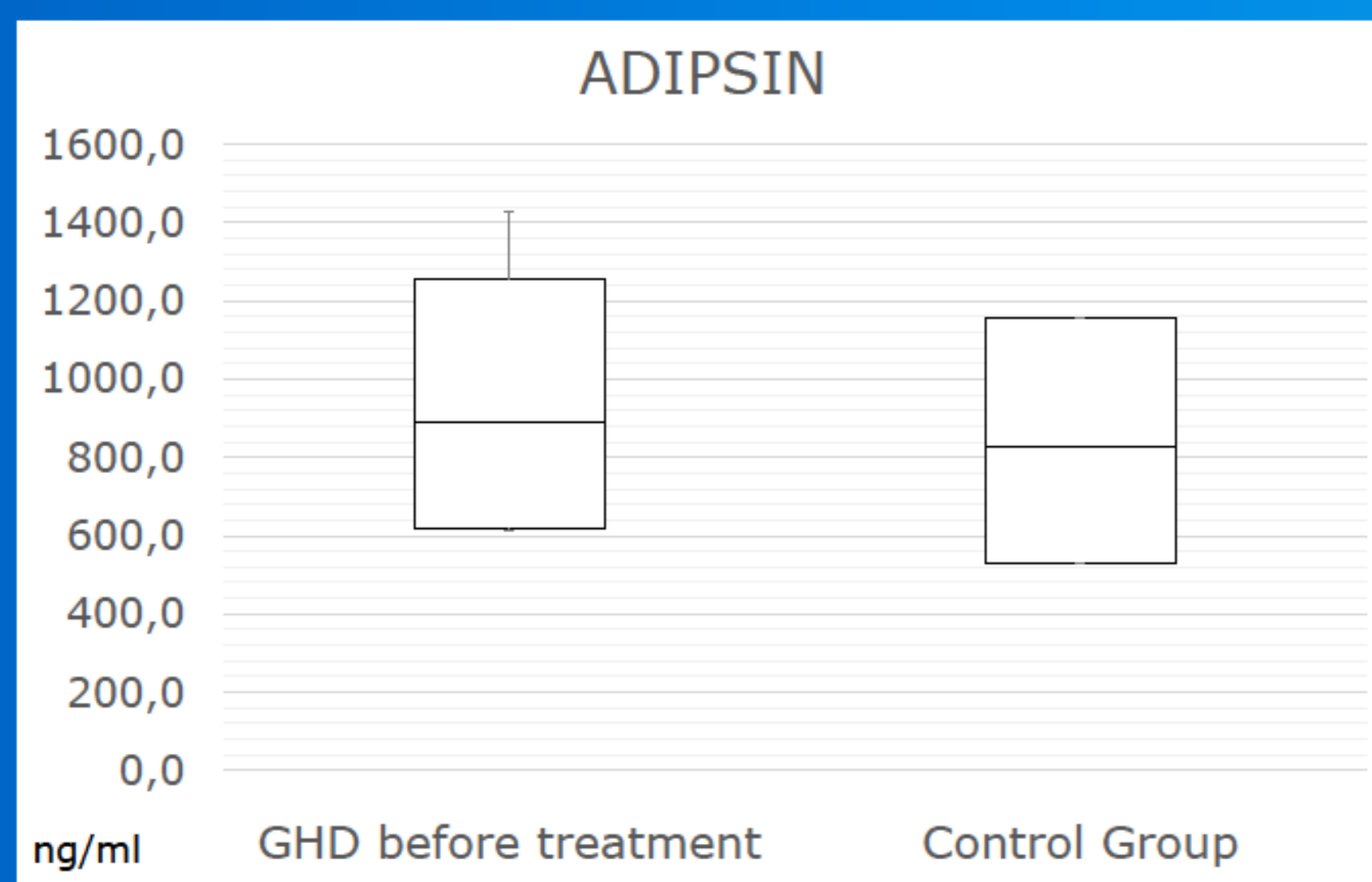
To estimate the effect of 6 month growth hormone (GH) therapy on serum concentrations of adipsin, omentin and vaspin in prepubertal children with isolated GHD.

## Materials and Methods

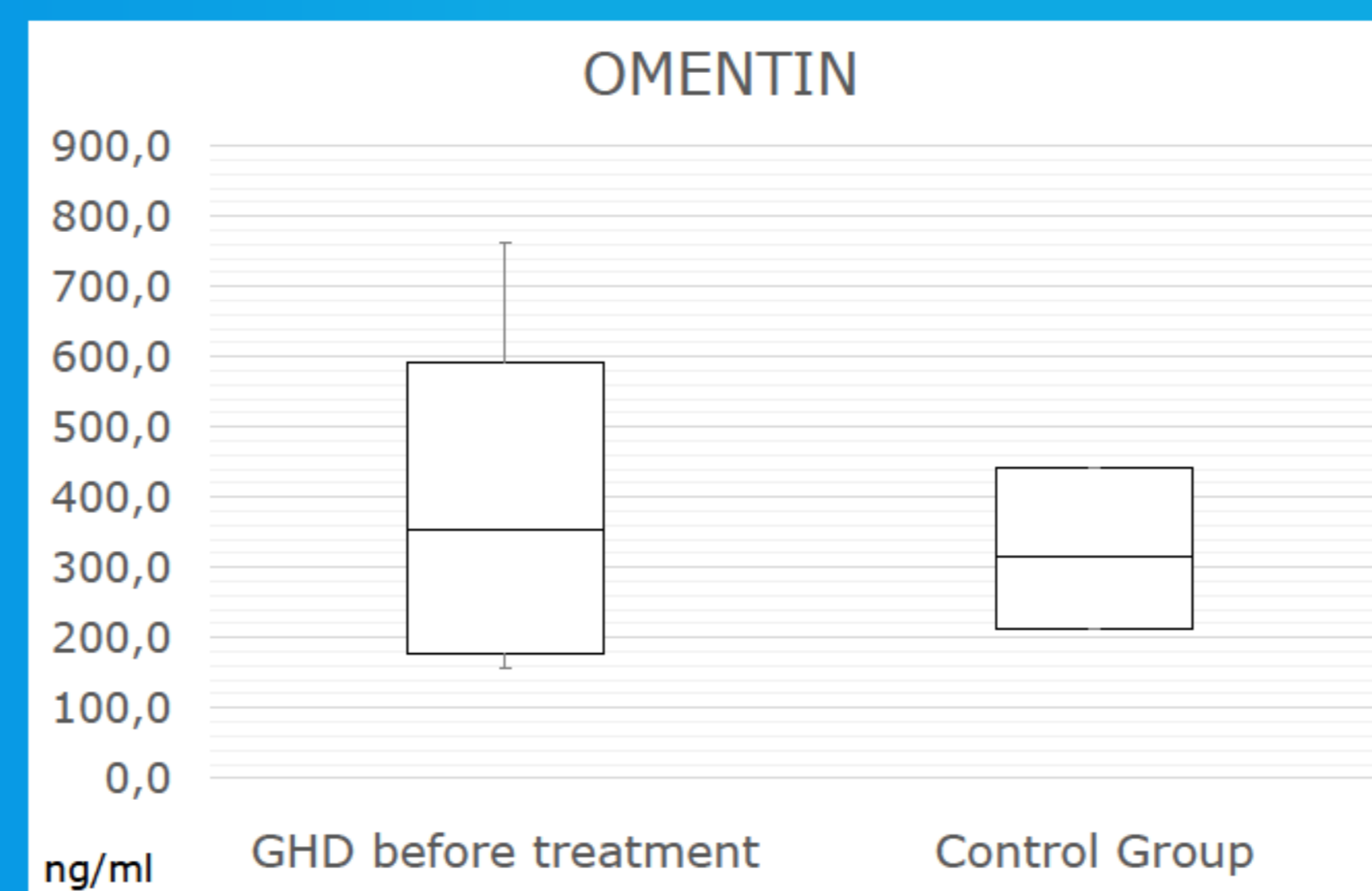
- 32 (22 boys, 10 girls) non-obese, short children with GHD (mean height 117.9 cm, -2.77 SD, mean BMI -0.75 SD), mean age 8.87 years.
- 18 (11 boys, 9 girls) age matched healthy children (mean height 125.8 cm, -0.93 SD, mean BMI -0.28 SD), control group (CG)
- Serum fasting adipsin, omentin and vaspin were measured in all children: in CD group and in GHD children before and after 6 months of GH therapy.
- In statistical analysis t-Student and U Mann – Whitney tests were applied.

## Results

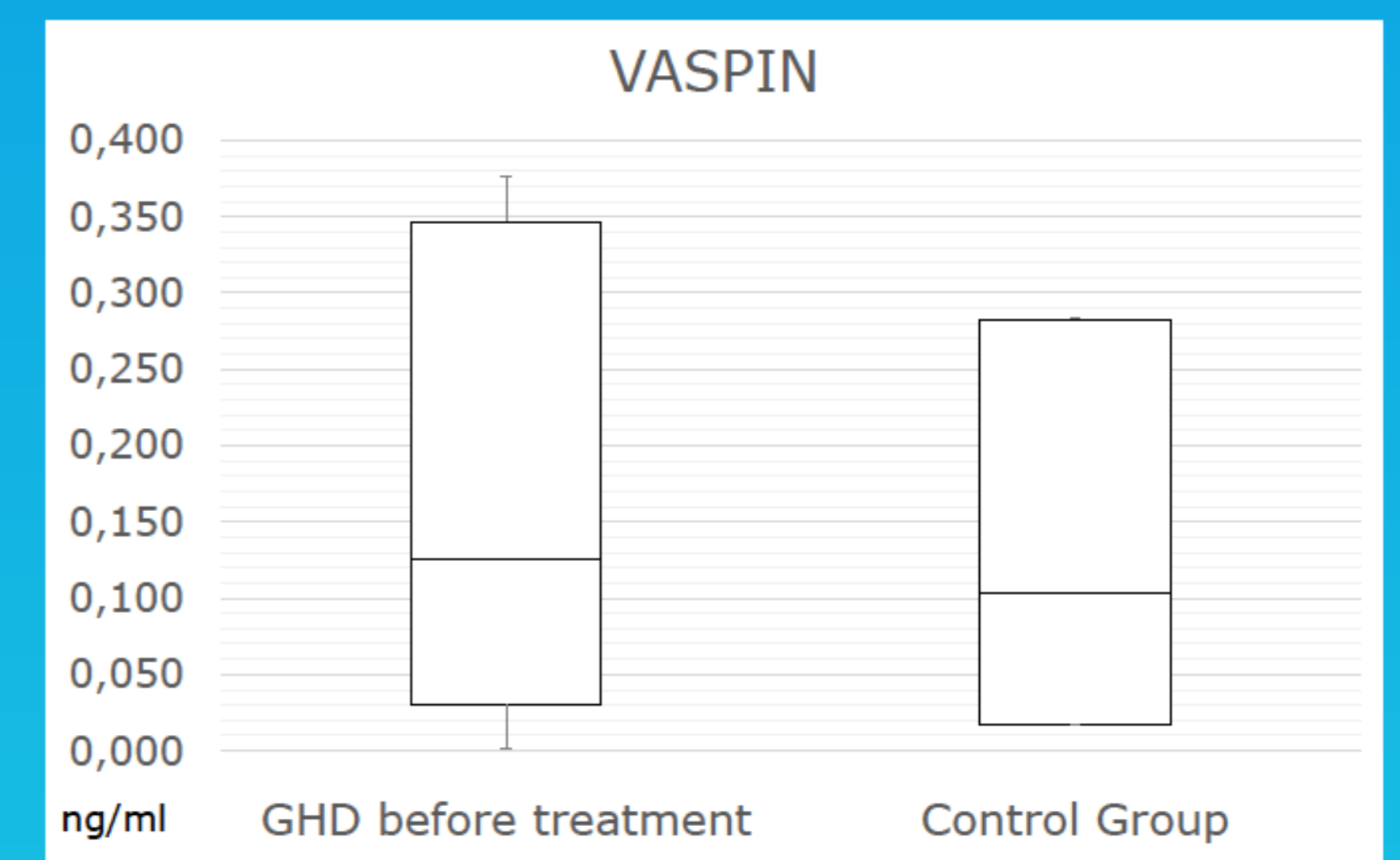
- Mean serum concentrations of adipsin, omentin and vaspin did not differ significantly between children with GHD before start of GH treatment and control group.
- Mean adipsin concentration in GHD untreated patients and in CG children was 890.4 and 826.8 ng/mL respectively (NS)
- Mean omentin concentration in GHD untreated patients and in CG children was 352.3 and 316.0 ng/mL respectively (NS)
- Mean vaspin concentration in GHD untreated patients and in CG children was 0.126 and 0.123 ng/mL respectively (NS)
- Adipsin concentrations were significantly lower after 6 months of therapy comparing to results before commencing GH therapy (890.4 vs 777.9 ng/mL,  $p < 0.01$ )
- Omentin concentrations were significantly lower after 6 months of therapy comparing to results before commencing GH therapy (352.3 vs 314.5 ng/mL,  $p < 0.05$ )
- Vaspin concentration was significantly higher after 6 months of therapy comparing to results before starting GH therapy (0.164 vs 0.106 ng/mL,  $p < 0.05$ )



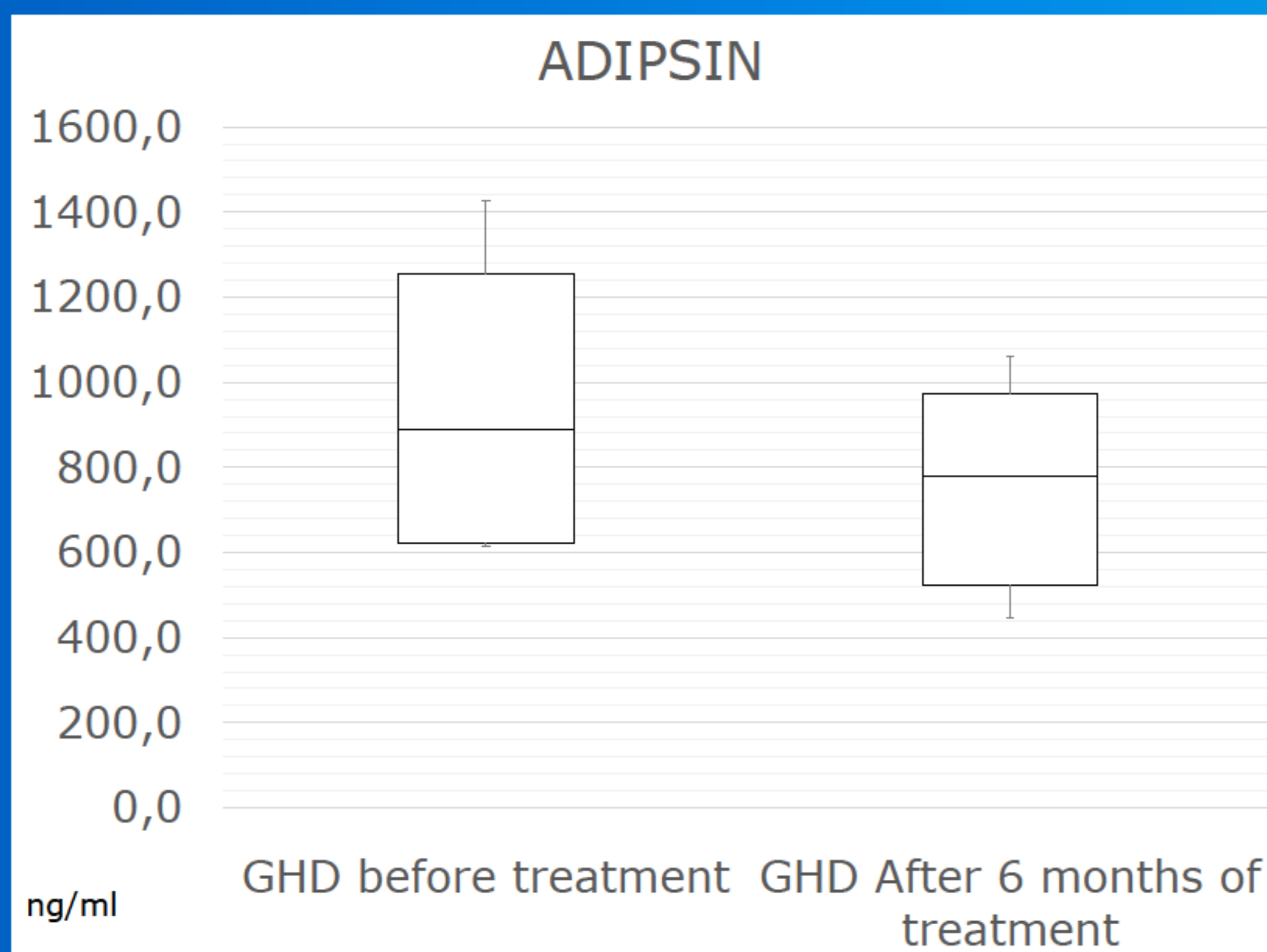
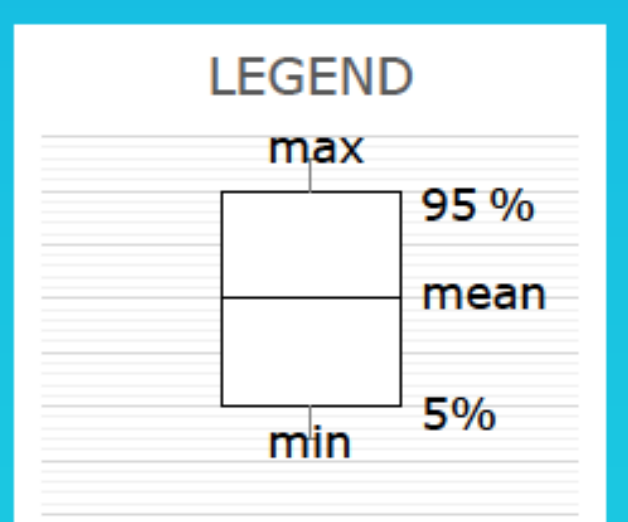
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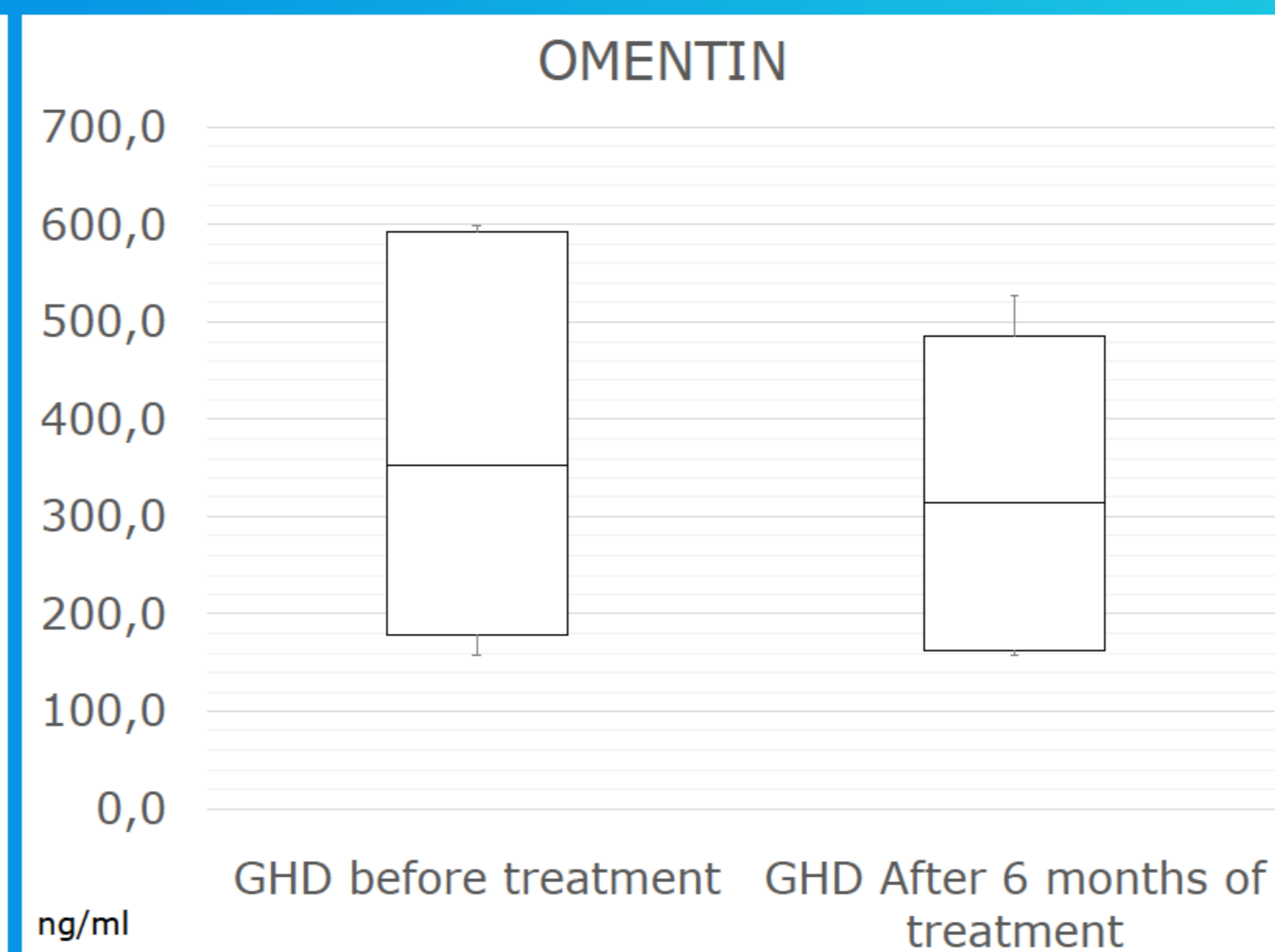
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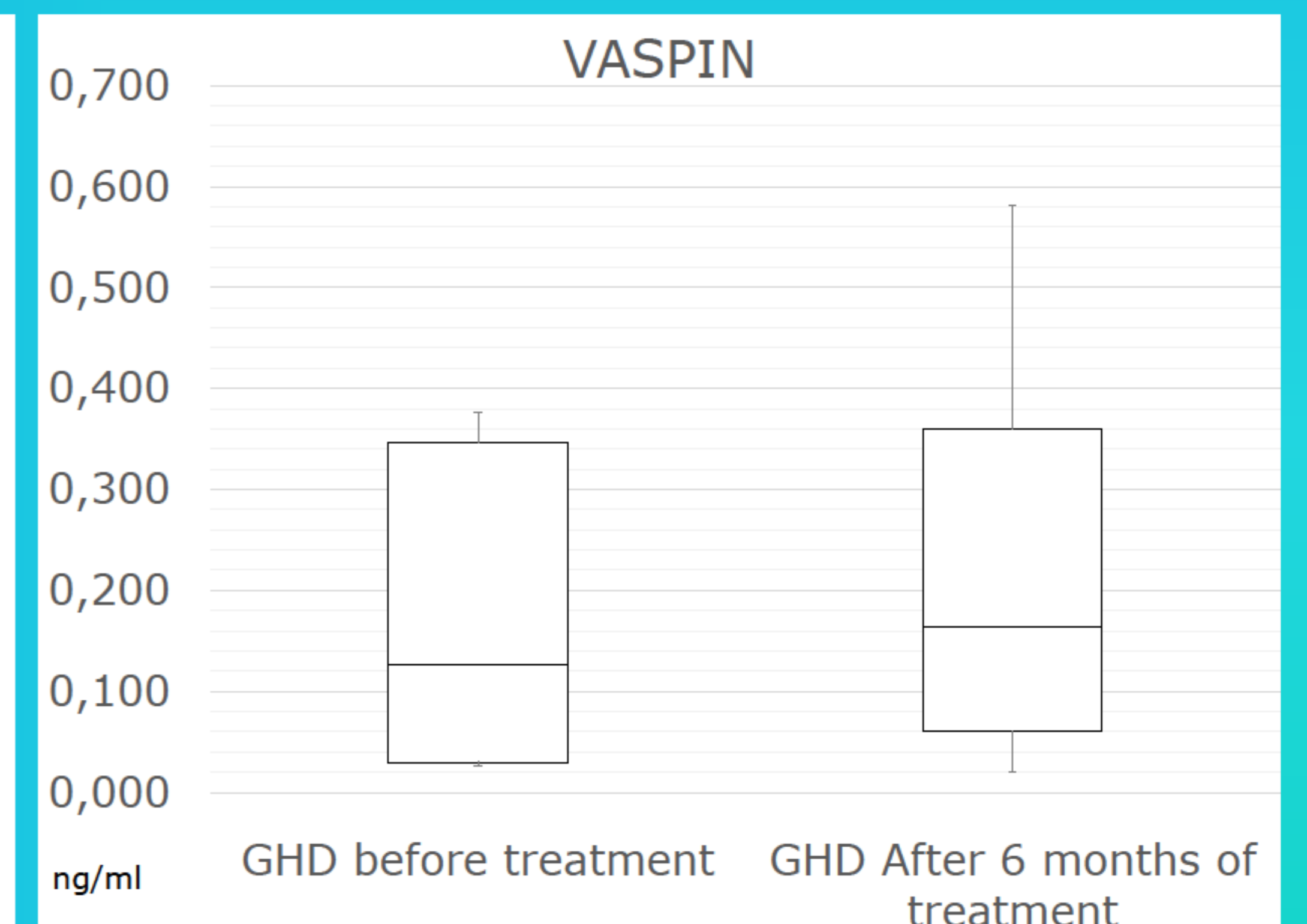
NS



$p < 0.01$



$p < 0.05$



$p < 0.05$

## Conclusions

GH therapy causes lowering of adipsin and omentin and increasing of vaspin in non-obese children with GHD

