

Role of additional risk factors of cardiovascular disease in men with type 2 diabetes and obesity.

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BACKGROUND

Late identification and inadequate assessment of cardiovascular risk factors are being considered as the main cause of high mortality in men with type 2 diabetes mellitus (T2DM).

OBJECTIVES

The aim of the work was to analyze the carbohydrate metabolism, levels of testosterone, proinflammatory cytokines in patients with T2DM and obesity.

METHODS

123 men
with T2DM and obesity
(mean age - 53,8 ± 6,8).

WERE ANALYZED:

- Body mass index (BMI), hip and waist circumferences, arterial blood pressure
- Parameters of carbohydrate metabolism (glucose, HbA1c, lipid profile)
- Total testosterone (T)
- Leptin
- C-reactive protein (CRP)
- E-selectin

1st group
N = 41
BMI 25-29,9 kg/m²

2nd group
N = 51
BMI 30-34,9 kg/m²

3rd group
N = 23
BMI 35-39,9 kg/m²

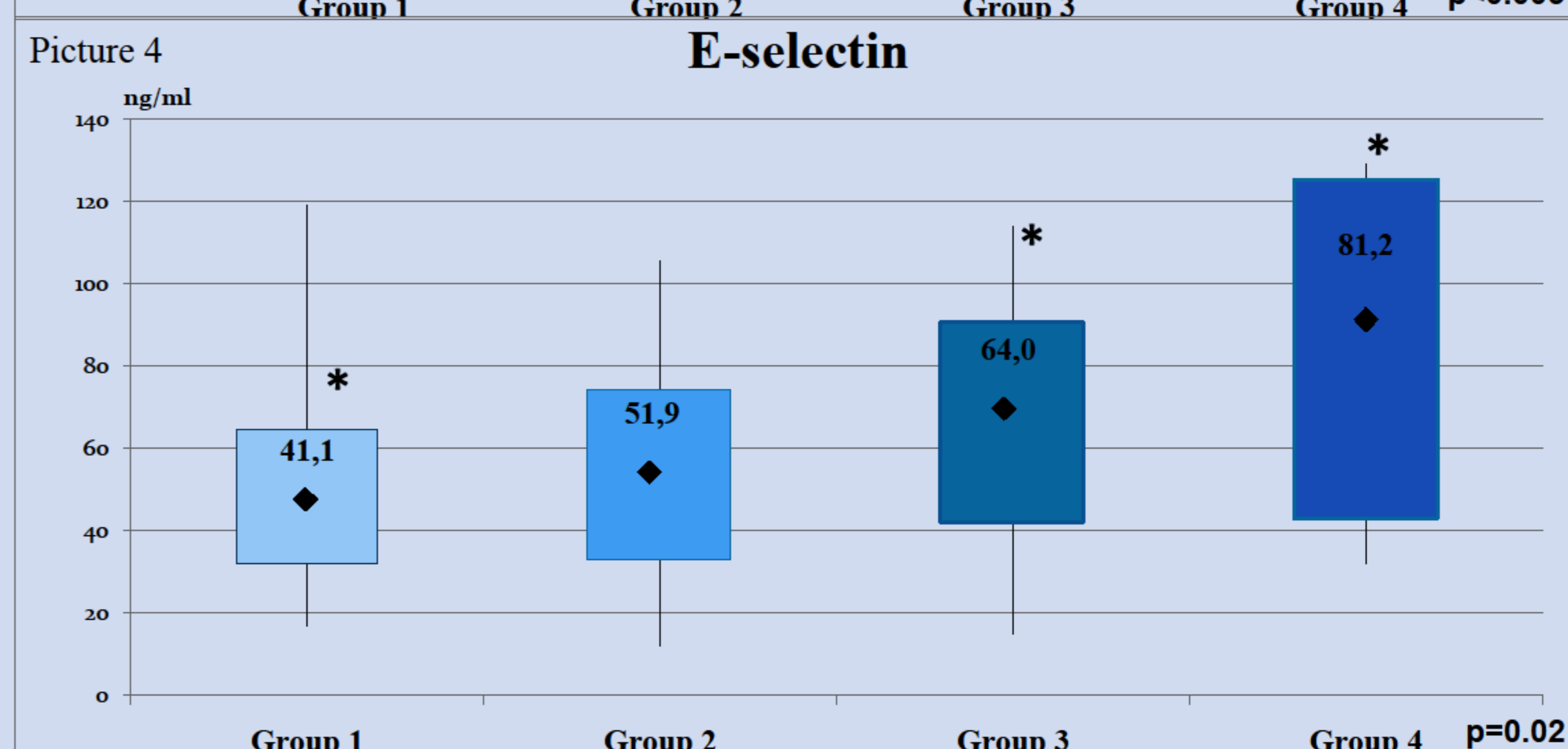
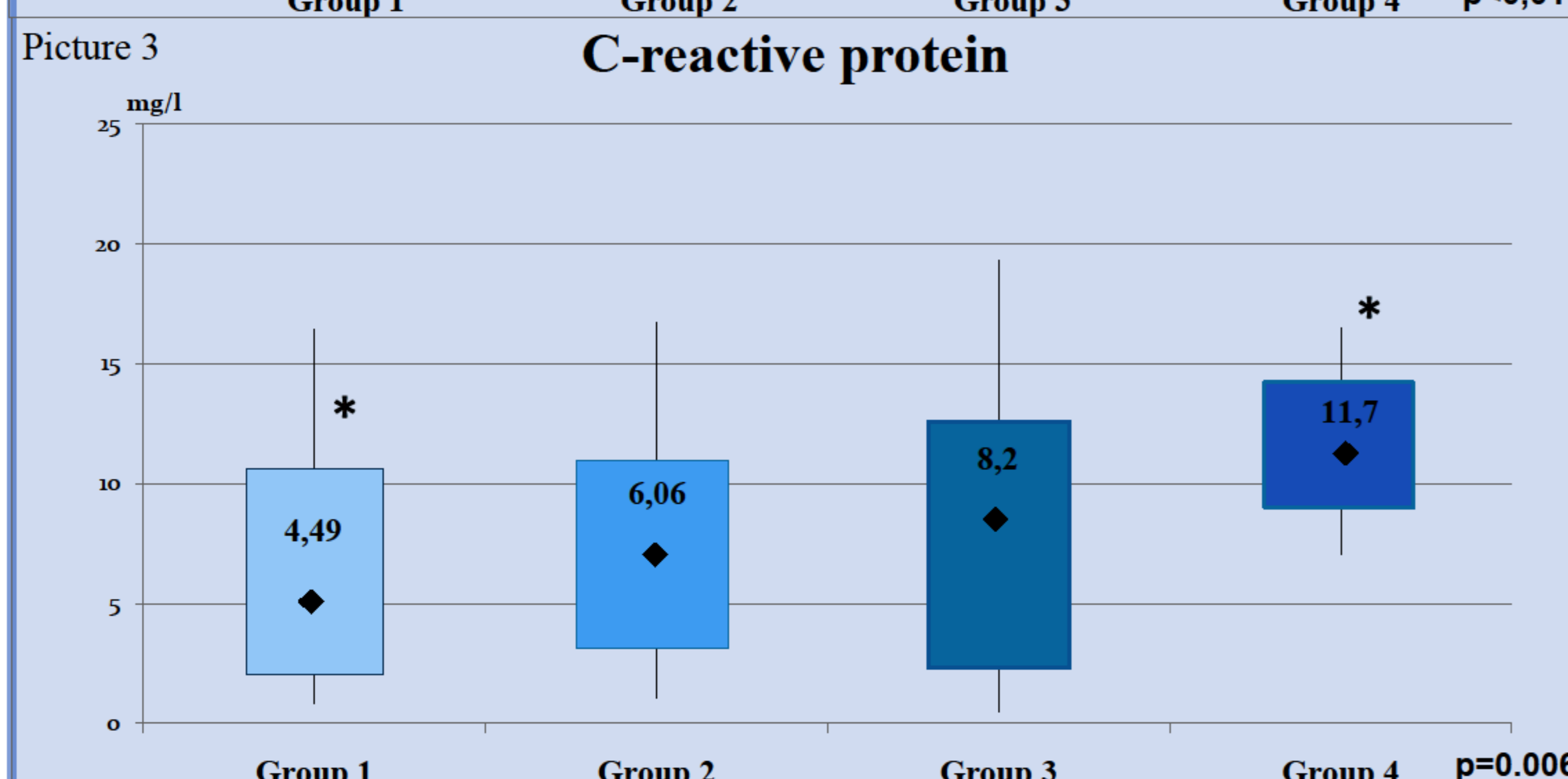
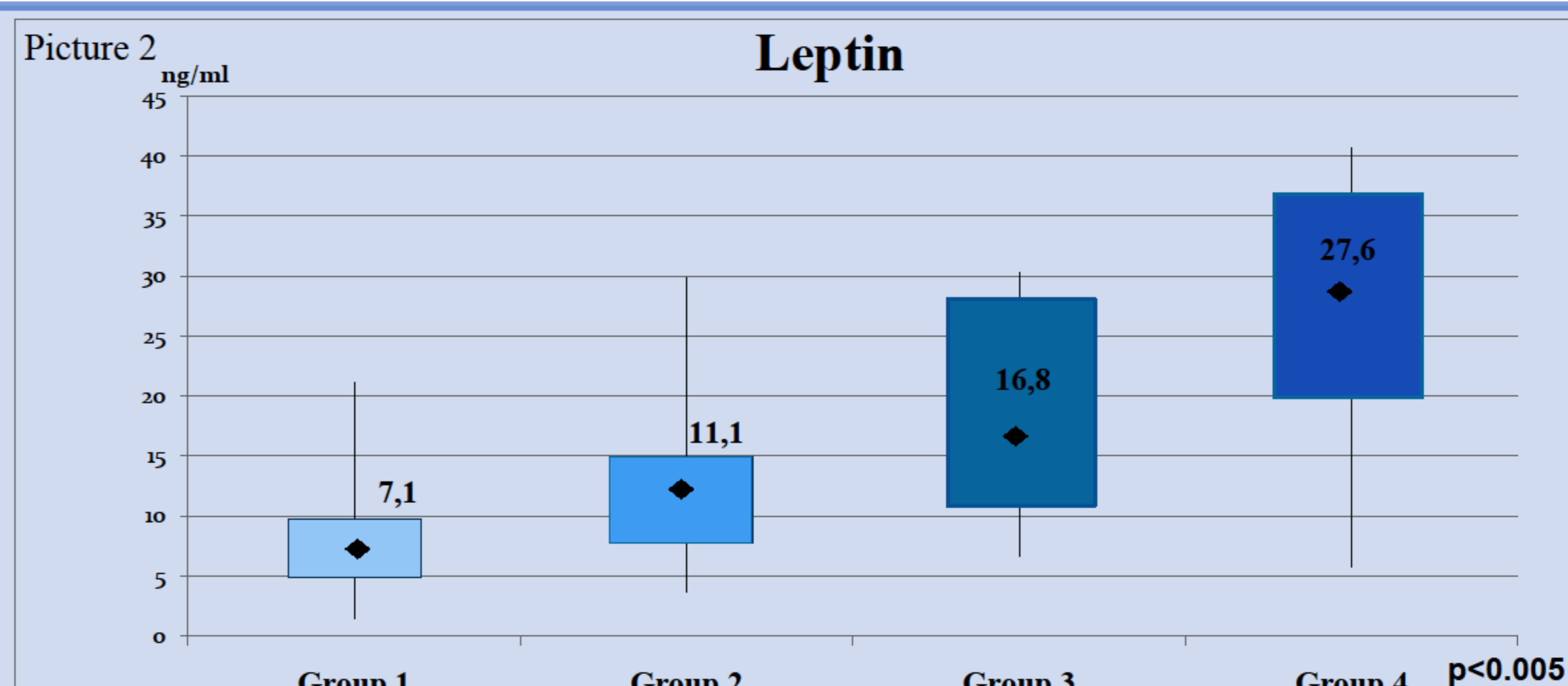
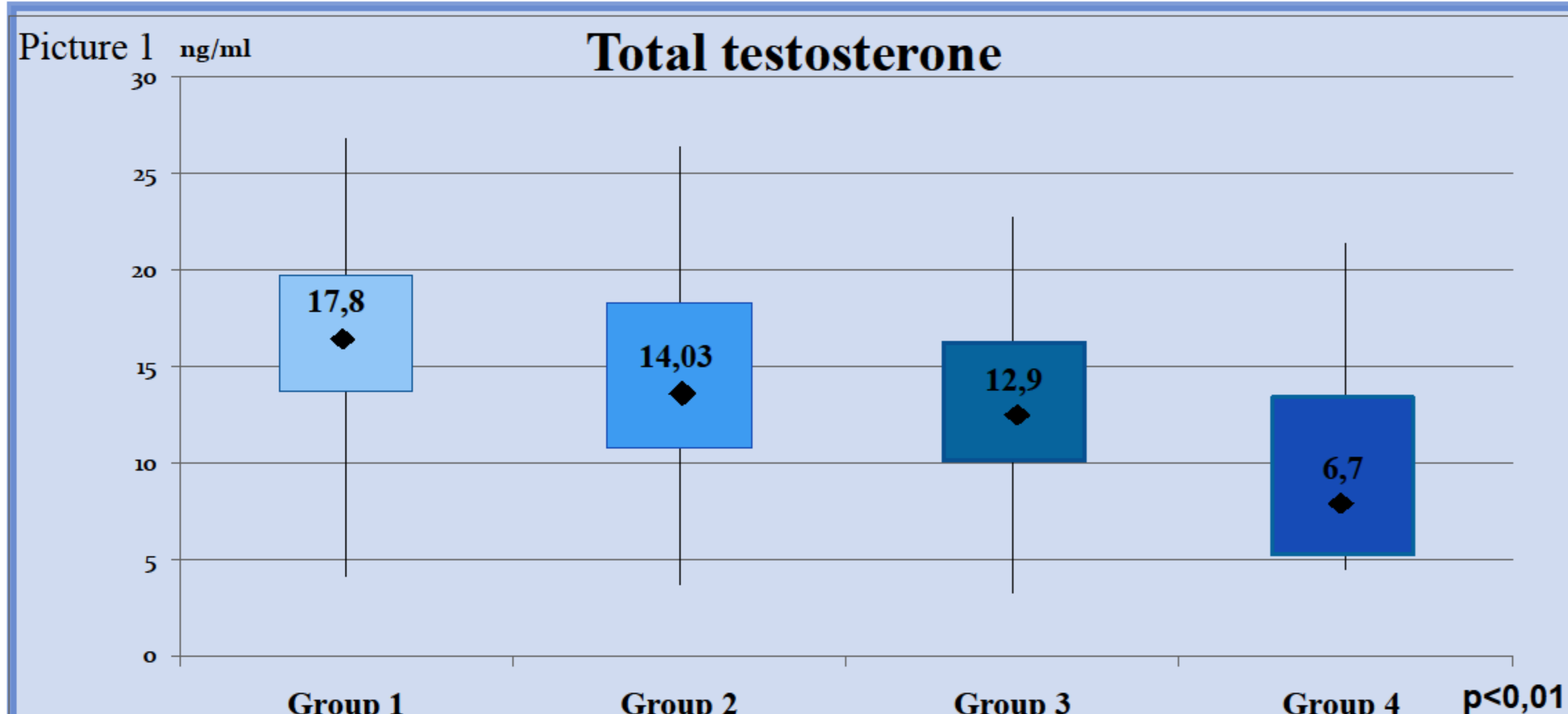
4th group
N = 8
BMI higher than 40 kg/m²

Data were analyzed using Mann-Whitney U-test for two independent groups.

RESULTS

Statistically significant differences in the parameters of carbohydrate metabolism between groups weren't found.

The levels of T decreased as the increasing of BMI (picture 1). Leptin level in the 1st group was 7.16 [4.89; 19.7] ng/ml, in the 2nd - 11.13 [7.75; 14.88] ng/ml, in the 3rd - 16.8 [10.86; 27.59] ng/ml, and in the 4th - 27.6 [20.15; 36.41] ng/ml ($p < 0.005$) (picture 2). The CRP concentrations were statistically different in the 1st (4.49 [2.06; 10.6] mg/l) and 4th (11.7 [9.04; 13.95] mg/l) groups ($p = 0.006$) (picture 3). The level of e-selectin in the 1st group was twice lower than in 4th (41.16 [32.03; 64.77] ng/ml vs 81.2 [46.1; 123.65] ng/ml) ($p = 0.02$) (picture 4).



CONCLUSIONS

The excessive accumulation of adipose tissue leads to decreasing of T levels in men with T2DM.

Increasing of leptin and CRP concentrations indicates the existence of systemic inflammatory process, which could be considered as an additional risk factor for cardiovascular disease in patients with T2DM.

ACKNOWLEDGMENTS

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