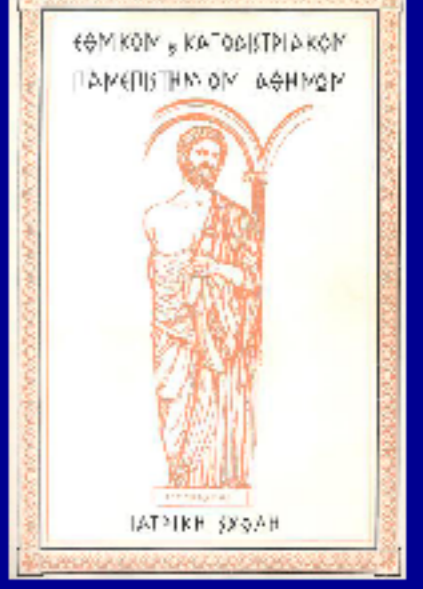


The higher gastrin levels were associated with better glycemic control

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Introduction

Gastrin is an early incretin candidate, since it is released by oral glucose and potentiates the glucose-induced insulin secretion. It has been shown that only in hypoglycemic or hyperglycemic conditions gastrin release is influenced by changes in blood glucose and insulin concentrations

Aim(s)

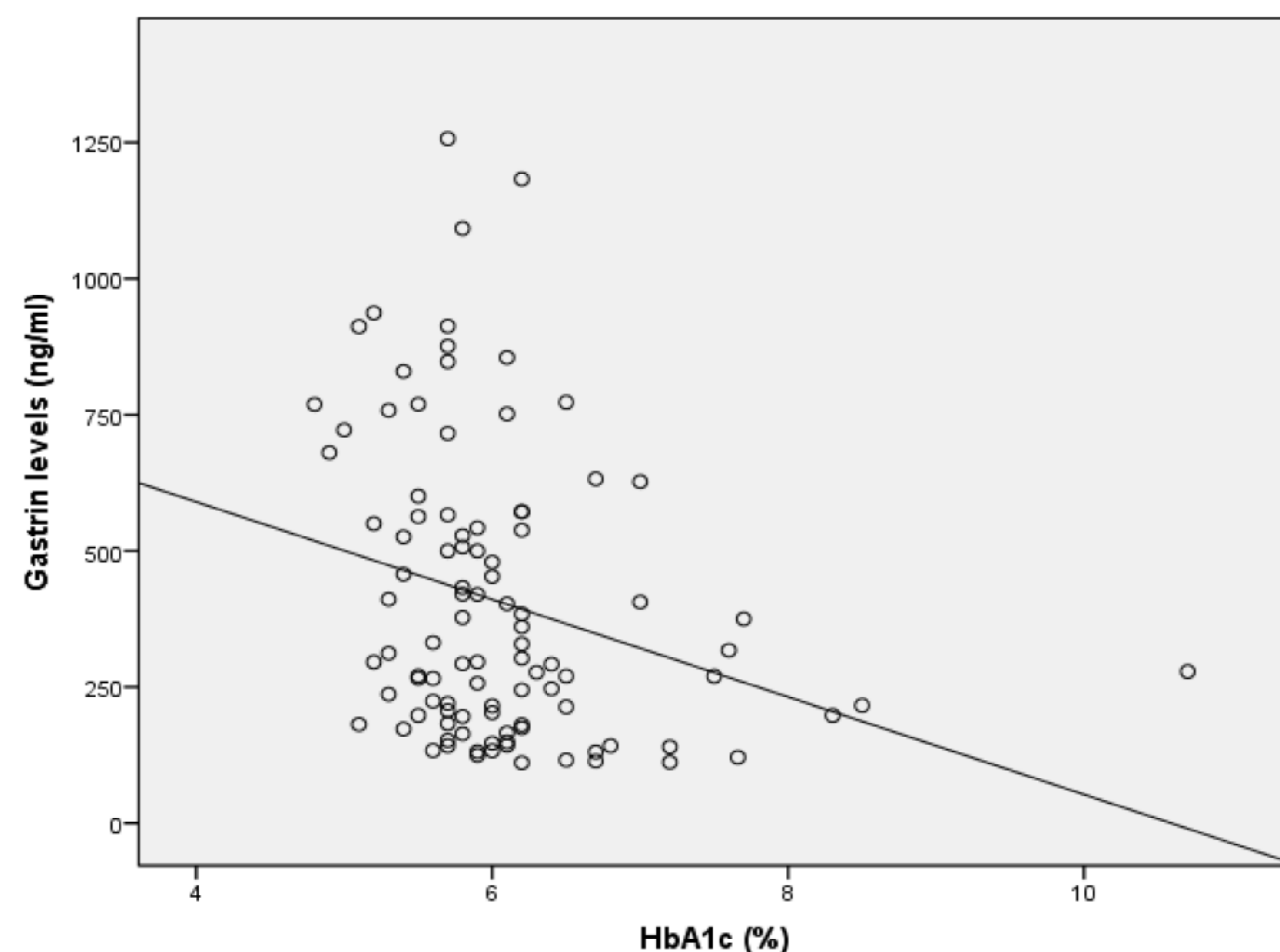
To evaluate whether there is a relation between fasting serum glucose levels, HbA1c, and serum gastrin concentrations

Materials and methods

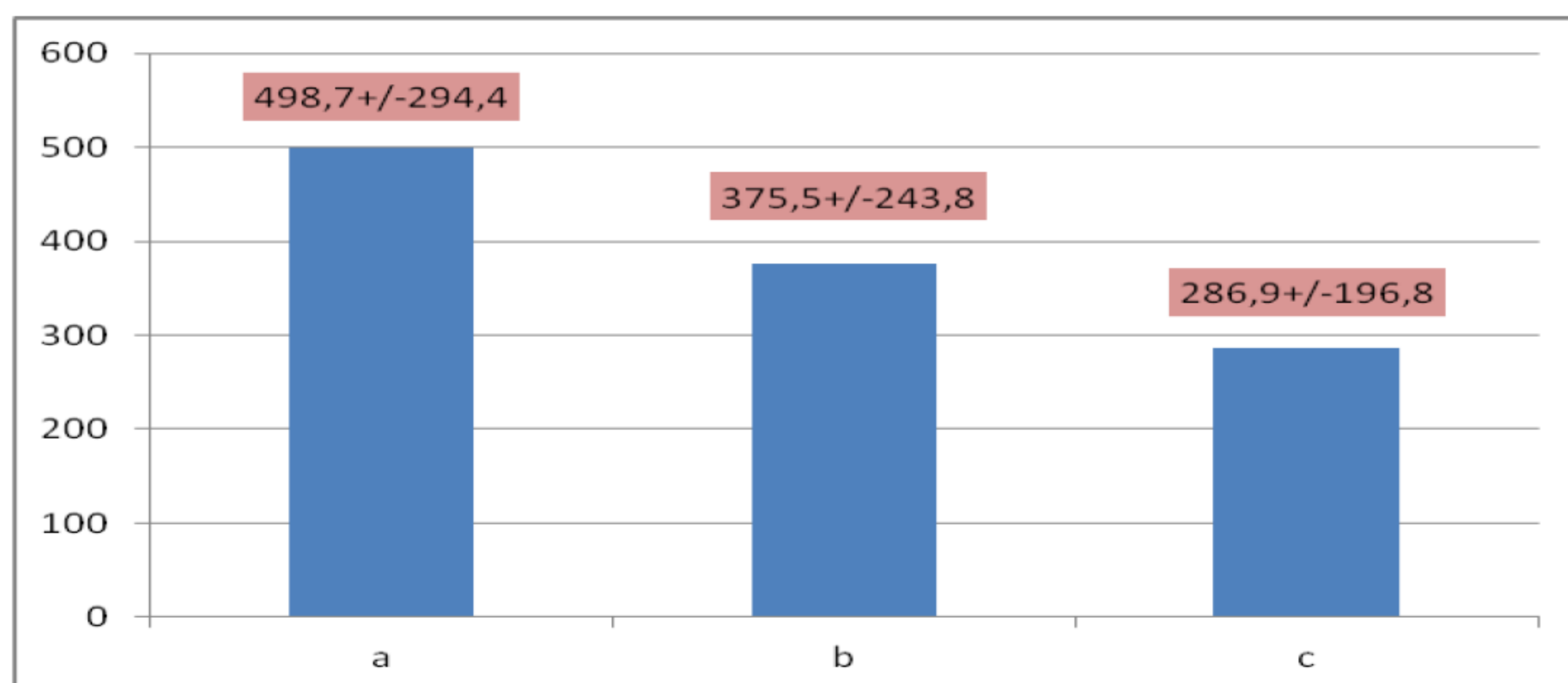
Gastrin and glucose levels and HbA1c were measured in 386 blood samples. We studied gastrin serum concentrations dividing the samples in 3 subgroups with glucose concentrations <100mg/dl (A), 101-200mg/dl (B), >201mg/d (C), in 3 subgroups with HbA1c <5.7% (a), 5.7-6.4% (b), >6.5% (c) and in 3 subgroups with gastrin levels 100-200 ng/ml (I), 201-500ng/ml (II) and >500ng/ml (III).

Results

Gastrin and HbA1c were negatively correlated ($r=-0.32$, $p=0.001$) in the total population of samples studied.



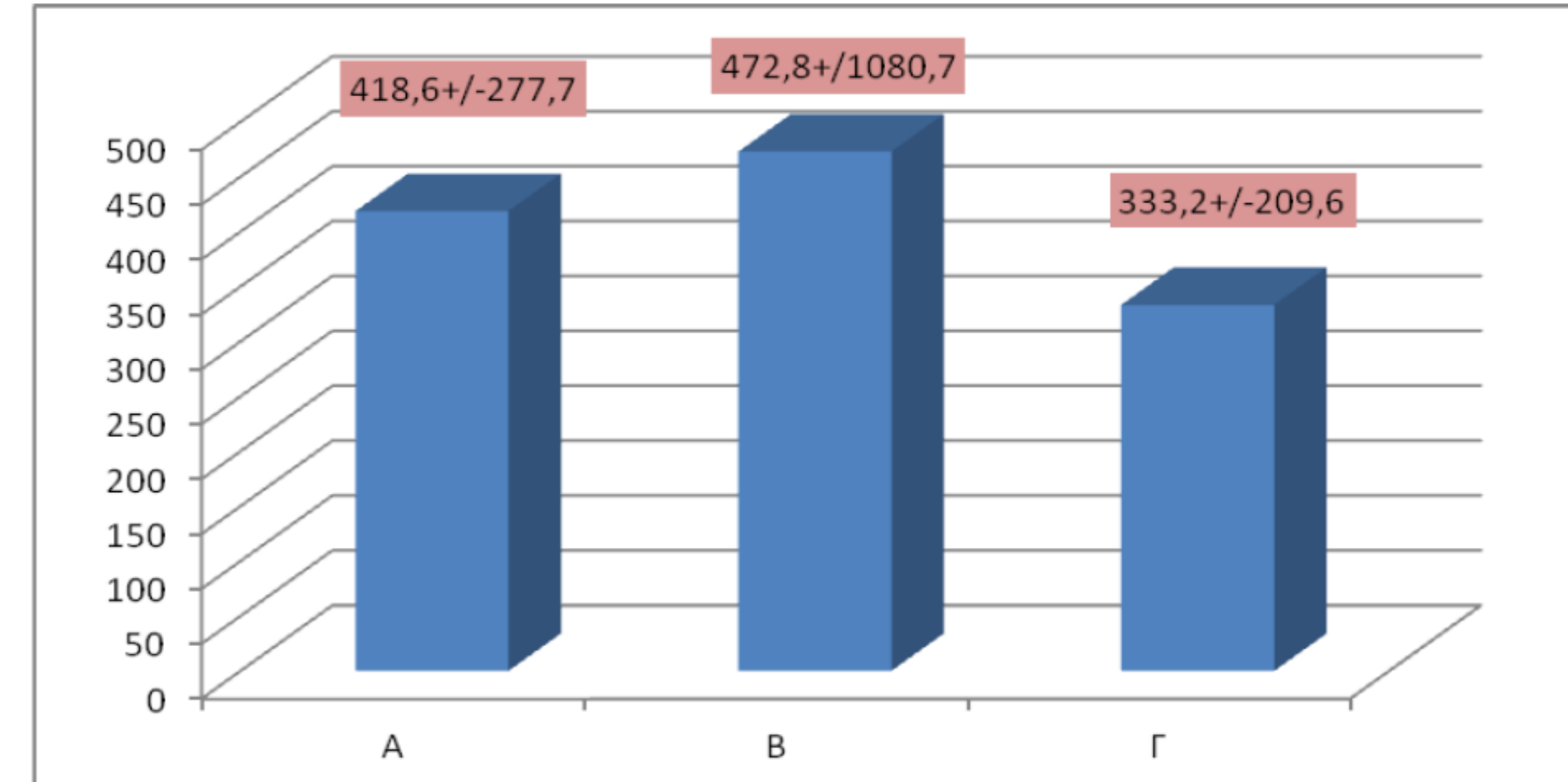
In the subgroups of normal, prediabetic, diabetic range of HbA1c, gastrin levels differed between normal (a) and prediabetic (b) range ($p=0.05$) and prediabetic (b) and diabetic (c) range of HbA1c ($p=0.005$).



Gastrin levels in 3 subgroups of HbA1c levels

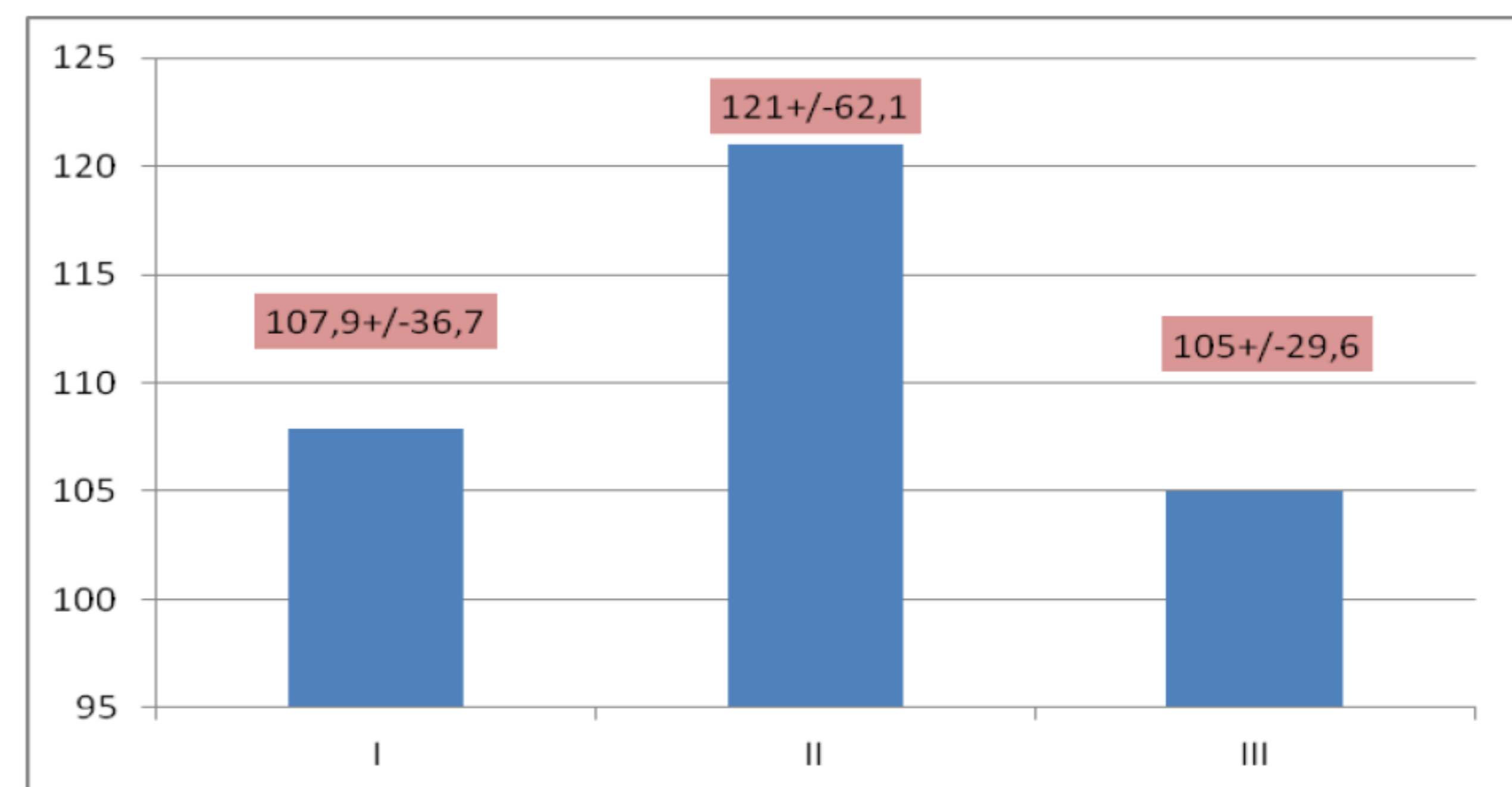
Results

No difference was found in gastrin concentration in the subgroups of normal, moderately increased, increased glucose concentrations.



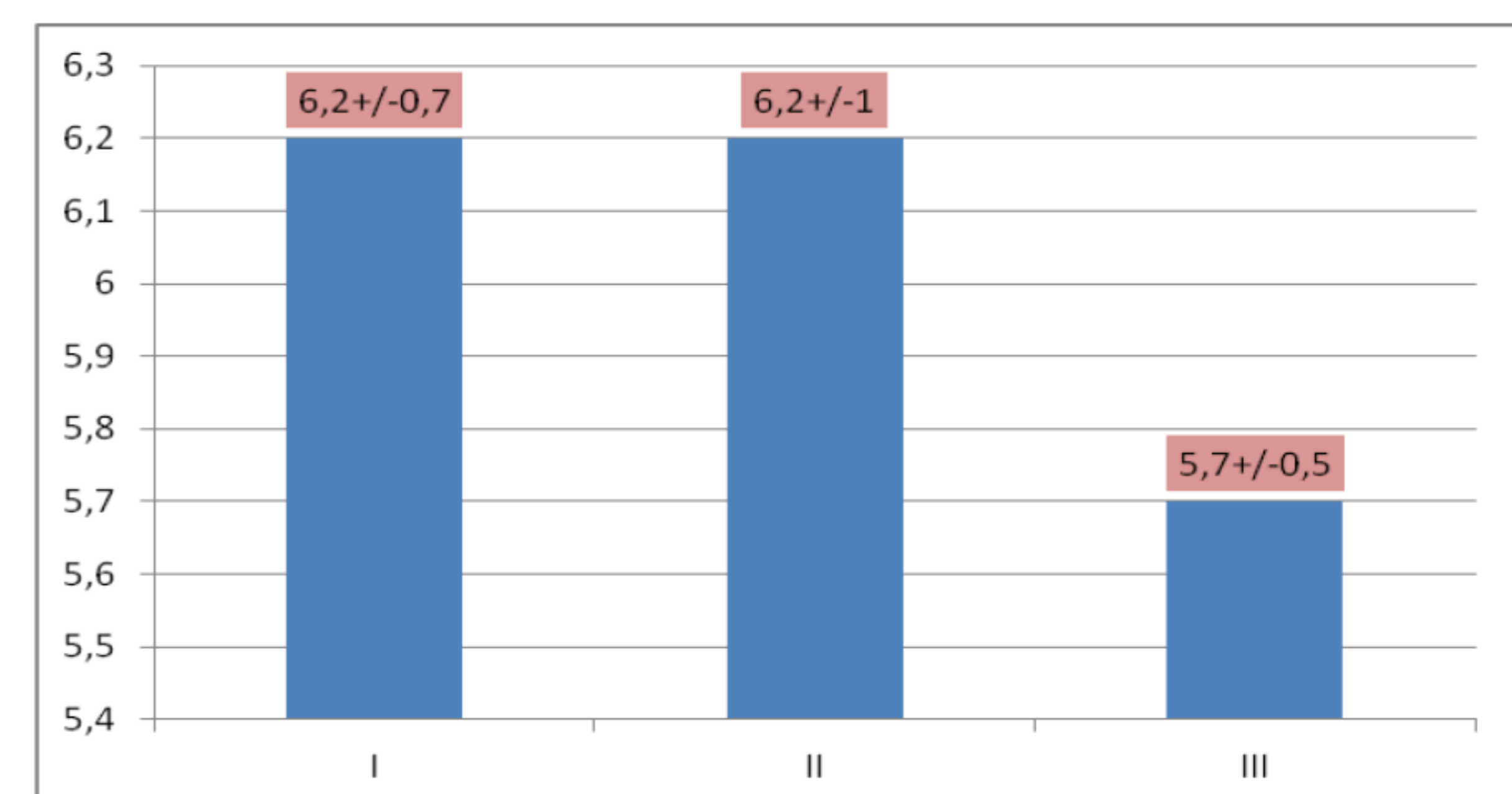
Gastrin levels in 3 subgroups of glucose levels

In low, mid-high, high gastrin levels glucose levels differed only between moderate (II) and high (III) gastrin levels ($p=0.05$).



Glucose levels in 3 subgroups of Gastrin levels

In low, mid-high, high gastrin levels HbA1c values differed between low (I) and high (III) ($p=0.006$) and moderate (II) and high (III) ($p=0.001$) gastrin levels.



HbA1c levels in 3 subgroups of Gastrin levels

Conclusions

A negative correlation between HbA1c and gastrin levels has been shown in the present study. In patients with higher gastrin levels had lower HbA1c compared to patients with high or moderate gastrin levels, indicating a better glycemic control. Nevertheless further studies are needed to confirm these findings.

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