CLINICAL ASSOCIATIONS FOR THE DEVELOPMENT OF ATRIAL FIBRILLATION, BODY WEIGHT AND HIGH-MOLECULAR WEIGHT ADIPONECTIN

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Objective: To evaluate the prognostic role of body mass index (BMI) and high molecular weight adiponectin (HMWA) levels in the development of atrial fibrillation (AF) in the general population.

Material and methods:

325 patients (among them 128 women - 39.38%) at the age of 35-55 years.

Metabolically Healthy Obesity (MHO) according to the Wildman MHO criteria:

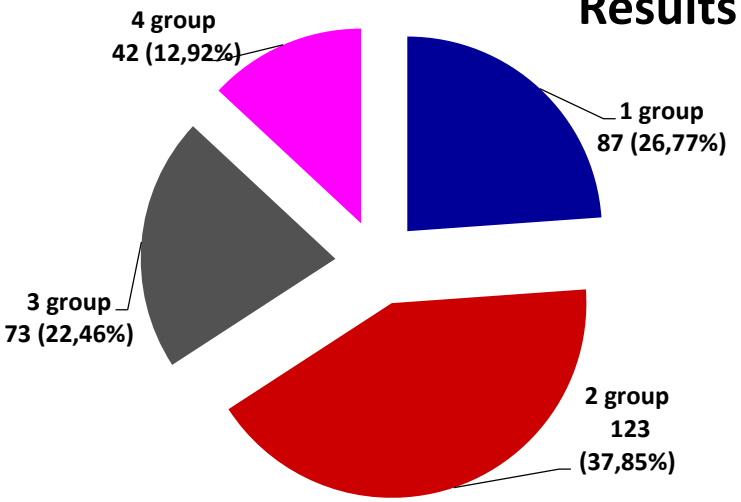
absence of arterial hypertension or antihypertensive therapy, dyslipidemia or lipid-lowering therapy, hyperglycemia ≥5.55 mmol / l or hypoglycemic therapy; C-reactive protein (CRP)> 4.72 mg / l; HOMA-IR > 4.81.

INR phenotype was considered as metabolic health – in 16 people (17.98%):

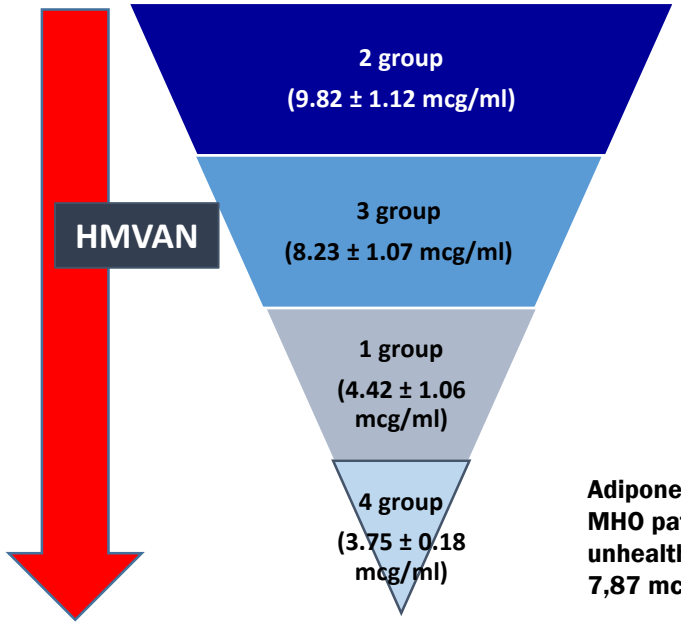
Follow-up period (4.2 ± 0.8 years)

The HMWA level was determined by the enzyme-linked immunosorbent assay (DRG, USA)

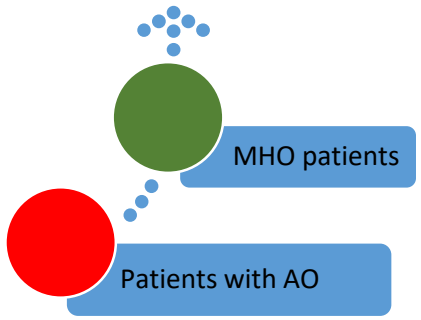
Results:



- 1 group - BMI ≥ 30 kg / m² - 87 patients (26.77%);
- 2 group - BMI 25-29.9 kg / m² - 123 patients (37.85%);
- 3 group - BMI 20-24,9 kg / m² - 73 patients (22.46%);
- 4 group - BMI <19.9 kg / m² - 42 patients (12.92%).



HMVAN level was significantly decreased in patients 1 and 4 groups compared to groups 2 and 3.



Adiponectin level was significantly higher in MHO patients compared to metabolically unhealthy patients with AO (11.32 ug / ml vs 7,87 mcg / ml), p <0.01).

During the follow-up period (4.2 ± 0.8 years), 28.26% of the participants developed AF.

The level of HMWA was significantly reduced in patients of groups 1 and 4 compared with groups 2 and 3.

Regression analysis revealed the dependence of the development of AF on the HMWA in patients of groups 1 and 4 ($\beta = -0.27$, $p = 0.004$ and $\beta = -0.25$, $p = 0.002$, respectively).

Conclusions: The probability of developing AF increases both with AO and with a decrease in BMI, which is accompanied by a change in the level of HMWA. This indicator can be used as a prognostic marker for the development of CVD.