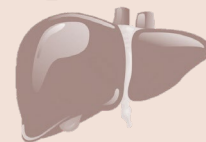


FEATURES OF CARBOHYDRATE METABOLISM IN PATIENTS WITH COMORBIDITY OF NON-ALCOHOLIC FATTY DISEASE AND HYPERTENSION

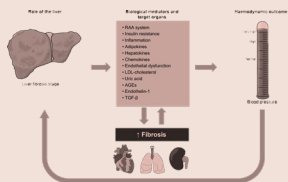
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INTRODUCTION

Non-alcoholic fatty liver disease (NAFLD) affects about 25% of adults. Considerable attention is paid to the NAFLD and hypertension (HT) comorbidity. Carbohydrate metabolism indicators in patients with NAFLD allow to assess the negative effects of the comorbid course of NAFLD and HT.

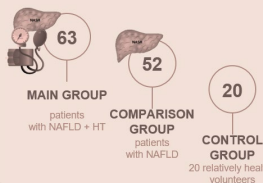


PURPOSE

To study the carbohydrate metabolism features in patients with NAFLD and HT.

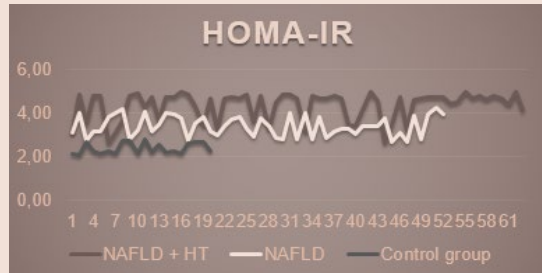
METHODS

We observed patients with NAFLD and HT (n=63), isolated NAFLD (n=52) and healthy volunteers (n=20). Biochemical parameters were obtained according to standard methods, HOMA-IR index was determined according to the accepted formula. Statistical analysis was performed using standard methods.



RESULTS

Glucose (5.87 mmol/l (CI 95% 5.76; 5.98)) and insulin (17.03 μ U/ml (CI 95% 16.03; 17.25)) levels were increased in patients with NAFLD and HT in comparison with the isolated NAFLD group (5.62 mmol/l (CI 95% 5.43; 5.60); 13.84 μ U/ml (CI 95% 13.42; 14.49)) and the control group (4.52 mmol/l (CI 95% 4.48; 4.61); 11.40 μ U/ml CI 95% 11.27; 12.44). The HOMA-IR index was 4.67 (CI 95% 4.17; 4.50) and 3.40 (CI 95% 3.29; 3.55) in NAFLD and HT patients and in isolated NAFLD group (Fig.1).



Glucose levels correlated with systolic ($r=0.32$) and diastolic ($r=0.26$) blood pressure in NAFLD and HT patients.

Risk of insulin resistance was directly connected with body mass index and waist circumference in NAFLD and HT patients ($r=0.69$; $r=0.51$), and in isolated NAFLD patients ($r=0.52$; $r=0.46$).

CONCLUSIONS

Hyperglycemia and insulin resistance characterize NAFLD patients. These changes are aggravated by the addition of HT, increased body weight, abdominal obesity presence and higher BP grade. This shows negative effect of HT on carbohydrate metabolism in NAFLD patients.