METABOLIC SYNDROME IN PATIENTS WITH GOUTY ARTHRITIS AND NON-ALCOHOLIC FATTY LIVER DISEASE

S. Spitsina
Research Institute of Clinical and Experimental Rheumatology named after A.B. Zborovsky,
Volgograd State Medical University;
Volgograd, Russia

ssspitsina@mail.ru

Target.

To study the frequency and structure of MS in patients with gouty arthritis in combination with NAFLD, to identify the main traditional and disease-associated risk factors.

Materials and methods.

The study included 70 patients with gouty arthritis. The diagnosis was made based on the criteria of S. Wallace et al. All patients were examined with general clinical and biochemical blood tests (determination of uric acid, transaminases, glucose, glycosylated hemoglobin, insulin, lipid spectrum), physical examination (measurement of blood pressure, body mass index in kg/m2), calculation of the HOMA index. An ultrasound examination of the liver was performed as the instrumental diagnostic method.

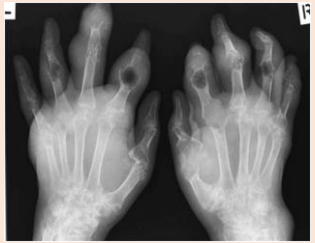
Results.

Among the surveyed, men and women accounted for 60% and 40%, respectively, with an average age of 52 years, with an average disease duration of 8.2±3.5 years. The debut of gouty arthritis was observed at 35.6 years. 25 patients had a family history of gouty arthritis. 64 patients had arterial hypertension. The patients were divided into two groups: the first group included 50 patients with primary gouty arthritis and signs of NAFLD (signs of steatosis in 64%, non-alcoholic steatohepatitis in 36%), the second group included 20 patients with gouty arthritis without signs of NAFLD. In group 1, 20 patients (40%) had arterial hypertension of the 1st degree, 30 (60%) patients of the 2nd degree. The uricemia level varied from 390.8 to 612.2 µmol/l. Dyslipidemia was diagnosed in 72% of patients (mainly type IIa and IIb). The average level of fasting glycemia was 7.8±3.0 mmol/l, and glycosylated hemoglobin was 7.0±1.5%. The average level of insulin in the blood serum of patients of the 1st group is 7.9 mIU/l, the 2nd group is 2.2 mIU/l, and the average HOMA index is 18.0. The body mass index ranged from 29.05 to 49.39 kg/m2 (70% were obese, the rest were overweight). All indicators of the metabolic syndrome in patients of the 1st group were significantly different from those of the 2nd group of patients ($p<0.005$).

Table 1: Characteristics of metabolic syndrome in patients with gouty arthritis and non-alcoholic fatty liver disease

indicator	values
arterial hypertension	1st and 2nd degree in 100% patients
the body mass index	29.05 to 49.39 kg/m2
uricemia	390.8 - 612.2 µmol/l
dyslipidemia (type IIa and Iib)	72% patients
glycemia	7.8±3.0 mmol/l
glycosylated hemoglobin	7.0±1.5%.
the average level of insulin in the blood serum	7.9 mIU/l
the average HOMA index	18.0

Figure 1: Radiographs of the hands of patients with gouty arthritis.



Conclusions.

Thus, a high prevalence of metabolic syndrome was revealed in patients with gouty arthritis and signs of NAFLD. In this group of patients, there are higher risks of developing insulin resistance and dyslipidemia, abdominal obesity and arterial hypertension, as well as hyperuricemia. All identified factors of the metabolic syndrome directly correlated with the duration of gouty arthritis.

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