функціональна здатність міокарда має тенденцію до зниження. Отримані дані свідчать, що П, особливо її хронічний перебіг, є фактором ризику ІХС, а тому в комплексну терапію П слід включати статини.

Висновок: П. часто є складною коморбідною патологією, для якої характерним є не тільки суглобовий синдром, але й поєднане ураження внутрішніх органів, в першу чергу з боку серцево-судинної та гепатобіліарної систем.

FEATURES OF BONE HOMEOSTASIS IN PATIENTS WITH GOUT AND HYPOTHYROIDISM

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The relevance of gout disease caused by its high incidence, which has increased several times over the past decade and continues to grow steadily, as well as the high incidence of its comorbid disorders.

To date, there are conflicting data on the relationship of gout and osteoporosis. Scientists are still discussing the role of uric acid in the body. On the one hand, the negative impact of gout on bone mineral density can be realized through systemic and local inflammation, which contributes to bone loss. On the other hand, a decrease in uric acid levels during uricodepressive therapy leads to inhibition of its antioxidant properties, which contributes to the development of osteopenia. Concomitant untreated hypothyroidism in patients with gout can have a protective effect on the state of bone tissue by slowing down bone remodeling processes, while treatment with thyroid hormones increases the rate of bone loss.

Bone remodeling is determined by two main processes - bone formation and resorption, the activity of which in healthy people is the same. Assessing the indicators of bone remodeling, it is possible to establish a mechanism for the development of osteodeficiency - there is insufficient bone formation or excessive bone resorption.

The aim of our study was to study the structural and functional state of bone tissue and features of bone metabolism in patients with primary gout on the background of untreated hypothyroidism.

Materials and methods. The state of bone homeostasis was assessed by the activity of a marker of bone formation (bone isoenzyme of alkaline phosphatase – BIAF,%) and marker of bone resorption (TRAF - tartrate-resistant acid phosphatase, U/ L) by biochemical method. Structural-functional state of bone (SFSB) we evaluated by ultrasound densitometry (apparatus LUNAR Achilles express, USA, 2008). Investigated parameters: Stiffness Index - bone strength index, which characterizes the density of bone (SD, standard deviation), T-score - bone density

deviation of the patient from the mean value of this parameter in healthy elderly respective gender (SD, standard deviation); Z-score - bone density deviation of the patient from patient with the same age, sex, body weight (SD). To assess bone quality, we used an indicator of broadband attenuation of ultrasound. Densitometric indices were evaluated in accordance with WHO recommendations regarding diagnostic criteria for osteoporosis: till -1 SD (standard deviation) is normal value; from -1 to -2.5 SD is osteopenia or preclinical stage of osteoporosis; -2.5 SD and more - definite osteoporosis; -2.5 SD and more in combination with an osteoporotic fracture is a severe form of osteoporosis.

Results. A comprehensive examination of 37 patients (17 men and 20 women) with primary gout in combination with untreated (first detected) hypothyroidism was carried out. The average age of patients was 52±6.4 years. To obtain normative indicators, a group of practically healthy patients (20 people) of the corresponding age was examined.

A study of the state of bone remodeling revealed a decrease in the activity of indicators of bone formation and bone resorption. In all examined patients, we found a decrease in the activity of the bone fraction of alkaline phosphatase by 58.3% compared with the same indicator in the control group of patients (64,59±5,17% and 84,31±4,45%, respectively). The intensity of bone resorptive processes in patients with this comorbid pathology was 14.8% lower compared with the same indicator in practically healthy patients (0,82±0,38 and 0,97±0,12 U/L, respectively).

A study of the structural and functional state of bone tissue in patients with gout combined with untreated hypothyroidism revealed an insignificant decrease in bone density against the background of a violation of its microarchitectonics. Osteodeficiency occurred in 23.1% of the examined patients (the average T-score was -1.39±0.08 SD, which corresponds to grade I-II osteopenia). The index of broadband attenuation of ultrasound, reflecting the state of bone trabeculae, was 25,9% less in comparison with the same indicator for a group of practically healthy people. The bone density index was slightly lower in this category of patients (88,7±2,8%); in the control group, its value corresponded to 96,2±4,2%.

Conclusions. In patients with gout in combination with untreated hypothyroidism, inhibition of bone metabolism takes place, namely, a significant slowdown in bone formation against the background of insignificant inhibition of bone resorption. As a result, there is an imbalance in bone remodeling processes with a predominance of bone resorption, which manifests itself as a tendency to the formation of osteopenia and a violation of the quality of bone tissue due to changes in bone microarchitectonics.