Our aim was to analyze, according to the modern literature data, the clinical peculiarities and spreading of the unusual presentations of gouty tophi variants, particularly the spinal gout.

The monosodium urate crystals are accumulated in the synovial fluid and form deposits on the cartilage and, potentiallyin every tissue of the body, including the axial skeleton, where the facet joints, spinous processes, intervertebral disks, or sacroiliac joints may have urate crystals deposits (Forbess LJ et al 2012). Spinal tophi may also occur and are rarely reported, resulting in various clinical manifestations such as back pain, spinal cord compression, radiculopathy, and even mimicking epidural abscess and spondylodiscitis (Wan SA, 2019). Although gout is prevalent worldwide, the cases of spinal gout are less frequently reported. They are presented variably with acute, subacute, or chronic symptoms. (Koro, L,et al., 2021). This author reported a case of a 35-year-old male with thoracic spinal cord compression by tophaceous gout who developed progressive spastic paraplegia and lower extremity numbness acutely over a 5-day period. Yafei Cao et al.,in 2019 reported a case of a patient that presented with quadriparesis that developed over 3 days, who was empirically treated for spinal gout. Liu T, et al., in 2015 reported an unusual case of thoracic spinal cord compression caused by extradural tophaceous deposits whose initial diagnosis had been lymphoid malignancy. Author did analysis of 26-year-old man with severe tophaceous gout presented with a 4-month history of progressive weakness and dyschesia of both lower extremities. In 2018, Ding et al. reviewed the characteristics of 30 previously reported cases of thoracic spinal cord compression caused by tophaceous gout and found that at the onset of disease, 60% of patients were presented with back pain and 43.3% had weakness and/or numbness in their lower limbs. HosseinElgafyet al., in 2016 in their review of literature describedthe clinical picture of 68 spinal gout patients.According to this investigation, 47 (69.1%) of patients were presented with localized back/neck pain, 38 (55.9%) with some form of spinal cord compression, defined as weakness, numbness, loss of bladder or bowel control, and decreased sensation below the compression level, 17 (25%) with spinal nerve root compression or radiculopathy, defined as motor dysfunction or dysesthesia along the course of a specific nerve caused by compression of its root, 13 (19.1%) with fever, 1 (1.5%) with cranial nerve palsy, and 2 (3.0%) with atlanto-axial subluxation.

So, due to its rarely encountered in clinical practice and the lack of typical defining criteria, the diagnosis of spinal gout is quite difficult and easily misdiagnosed. It is recommended that patients presenting with axial pain; radicular pain or myelopathy; and especially high uric acid levels, with or without a history of gout, should be evaluated for spinal gout.

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BRONCHIAL ASTHMA IN COMBINATION WITH DIABETES MELLITUS TYPE 2 – THE CURRENT STATE OF THE PROBLEM

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According to WHO, the number of patients with bronchial asthma (BA) continues to grow rapidly in the world and by 2025 the number of patients with asthma seems to be increased by 100 million people. According to GINA 2019, the prioritized task is to study clinical and functional signs of asthma phenotypes in case of comorbid states presence, as well as detection of biomarkers of the pathological process. Despite all the success achieved in the diagnostic process and treatment, diabetes mellitus (DM) continues to be among the top 10 causes of death in the world (9th place), and in the DALY list – 8th place.

The aim is to analyze literature on the issues of comorbid asthma and diabetes mellitus type2. The full-text test mode access to THE ELSEVIER, SCOPUS, EBSCO, MEDLINE, PUBMED, SPRINGER database had been used, as well as authoritative Ukrainian and foreign therapeutic editions, in particular pulmonology journals.

In the study conducted in 2021, Gabor Tomisa indicated the prevalence of DM among patients with asthma in the broad range of 0,8-13,9%. The risk of asthma in patients with diabetes is 2,2 times higher than for patients without diabetes. The combination of DM type 2 and BA, which

are multifactorial diseases, is accompanied by a cascade of metabolic disorders and is associated with worse control of glycemia, frequent and severe BA exacerbations. In the US study published in 2019 (Wu et al.) higher level of HgbA1c was associated with higher rates of asthma exacerbation. In 2020 Sarah a Hiles et al. pointed out that the blood eosinophils count in respiratory tract diseases is an important field of research, especially in the perspective of precision medicine, where biomarkers can be used for more individualized treatment. Furthermore, in those with early onset asthma, it is associated with increased eosinophilic inflammation, whereas in late onset, it correlates with predominantly non-T2 inflammation and lower nitric oxide (NO) (HartmutGrasemann, 2020). The feature of the immunological status of patients with BA in combination with DM type 2 is the reduction of IgE level along with the increase in the number of lymphocytic autoantibodies. Such pathogenetic changes as the reduction in the allergic and immunocomplex components of the chronic inflammation process may indicate switching to the autoimmune process, which is more aggressive (Yeryomenko G.V., 2019). A recent study (Katrien Eger, 2021) shows that the vast majority of patients with severe asthma respond favorably to anti–IL5 biologics after 2 years of treatment, however it is a proportion of nonresponders. There are no available clinical studies that would show the effectiveness of using glutathione or its precursors, such as S-adenosilmethionine (SAM), in improving clinical outcomes in patients with comorbid asthma, obesity and/or DM type 2. It was established that a reduced level of vitamin D (VD) is more significant among obese people, and it was detected a negative correlation between a concentration of 25(OH)D and the risk of diabetes mellitus. The low VD level was associated with increased asthma morbidity and susceptibility to air pollution. However, the results of some earlier clinical trials which added vitamin D to treatment were significantly disappointing in improving clinical outcomes in asthma. (Sonali Bose et al., Mario Castro et al., 2019)

Taking all into account, there is still a significant percentage of patients with BA resistant to treatment, especially in the case of comorbid pathology. Therefore, it is necessary to continue researches on pathological mechanisms of the mutually aggravating BA and DM type 2, the inflammatory endotyping, determination of genetic and epigenetic markers with the purpose of development new biological drugs and improvement of patients' life quality. Further studies should be conducted to determine the impact of gene polymorphism VDR and CD14 on the clinical course and treatment response of patients with comorbid asthma and DM type 2. In addition, further research is needed to understand how excessive production of reactive oxygen species (ROS) due to mitochondrial dysfunction in asthmatic patients with comorbid DM type 2 worsens the state of airway epithelial, causes changes in lung function and reduces the response to treatment.

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EFFECTS OF COMBINED THERAPY WITH ROSUVASTATIN AND POLYUNSATURATED OMEGA-3 FATTY ACIDS ON LIPOPROTEIN-ASSOCIATED PHOSPHOLIPASE A2

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Atherosclerotic cardiovascular disease is still the leading cause of morbidity and mortality worldwide despite great advances on diagnosis and treatment have been achieved in the past decades. Diabetic subjects have a two- to four fold increased risk of heart disease, but the mechanism through which this increased risk is mediated is not fully understood. Inflammatory processes have been increasingly recognized as a critical step in the pathogenesis of both diabetes and heart disease and may offer a biological link between the two diseases. One newly recognized inflammatory biomarker is lipoprotein-associated phospholipase A_2 (Lp-PLA_2), an enzyme that may influence atherogenesis and plaque rupture without altering the general immune response. Lp-PLA_2 is an enzyme excreting predominantly from atherosclerotic plaques by macrophages and neutrophils and then circulating in blood stream. Previously, clinical epidemiological studies showed that increased plasma level of Lp-PLA_2 was associated with increased risk of cardiovascular events such