



Uric Acid and Cardiovascular Risk

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Received: June 20, 2022

Published: July 01, 2022

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It is generally known that elevated serum uric acid level can lead to gouty arthritis, the formation of tophi and kidney stones. Also in recent years many studies have demonstrated an important role of hyperuricaemia (increase of serum uric acid level more than 7 mg/dl) in cardiovascular pathology - hypertension, heart failure, coronary artery disease, atrial fibrillation, diabetes mellitus, metabolic syndrome etc. There is evidence that hyperuricemia is an independent cardiovascular risk factor.

The exact mechanism of this impact is unknown, but the role of the following factors is reported: uric acid associated oxidative stress and endothelial dysfunction, the state of systemic inflammation, activation of renin-angiotensin-aldosterone system and vascular remodeling.

Positive effects of normalization of serum uric acid level have shown more than once. Generally accepted target level of uric acid is considered below 6 mg/dl for all patients. With this purpose we should prescribe diet and lifestyle modification for all patients with hyperuricemia. Pharmacological treatment, in particular xanthine oxidase inhibitors, is strongly indicated for symptomatic patients. But the question about treatment of asymptomatic patients is still controversial.

Taking into consideration cardiovascular safety, it would be appropriate to prescribe the uric acid lowering agents as minimum for asymptomatic patients with serum uric acid level more than 9.5 mg/dl, because of confirmed positive effects on cardiovascular risk for this patient group.

Another side of this problem - increased cardiovascular mortality in patients with extra-low uric acid level (less than 4 mg/dl) related to active treatment with uric acid lowering drugs.

Thus, some aspects related to hyperuricemia and cardiovascular risk require further study. But it is definitely recommended to control the serum uric acid level in patients with hyperuricemia, lifestyle change and uric acid lowering diet, and pharmacological treatment in patients with extra-high hyperuricemia even in asymptomatic. At the same time, extra-low serum uric acid level should be avoided during treatment.