

Press release

Not only gout: high levels of uric acid are also a risk factor for heart attack and diabetes

Symposium with the title "From gout to cardiovascular disease: a central role for uric acid" held in Bologna

> Uric acid is an important risk factor for cardiovascular and kidney diseases

Some foods are associated with an increase of uric acid levels

Uric acid contributes to making blood vessels more susceptible to the onset of atherosclerosis

Bologna, 6 November 2014 - The role of uric acid in various diseases has by now been firmly established. High uric acid levels are not only responsible for gout, the most frequent form of arthritis in adults, but also play a part in cardiovascular diseases and diabetes. To shed light on the mechanisms underlying the link between inflammation and disease, the world's leading experts meet in Bologna from 6 to 8 November 2014 for a symposium with the title "From gout to cardiovascular disease: a central role for uric acid", organised by the Internal Medicine Unit of the S. Orsola-Malpighi University Hospital, Alma Mater Studiorum University of Bologna, and by the Rheumatology Department of the Laribosiére Hospital of Paris, and sponsored by the Fondazione Internazionale Menarini. «If the solubility limit is exceeded, uric acid precipitates in the tissues in the form of microcrystals whose presence leads to inflammatory reactions in the soft tissues, kidneys and joints, where it may result in the typical manifestation of acute arthritis, in other words gout» Claudio Borghi, Director of the Internal Medicine Unit of the S. Orsola-Malpighi Hospital and co-chairman of the symposium, explains. «But uric acid is also an important risk factor for cardiovascular and kidney diseases in people with high blood pressure, heart failure and diabetes. In these individuals, high uric acid levels may also contribute to the onset of a heart attack or stroke and thus to death. According to some studies, uric acid could be a contributing factor in four out of every ten heart attacks, especially in patients with high cholesterol levels, high blood pressure and high blood sugar.»

These considerations are a cause for concern, given that mean uric acid levels are progressively on the rise in Western countries: in the United States, the value in the male population has doubled over just a few decades. The recent progressive increase of uric acid levels is linked to the growing prevalence of overweight and obesity and to the increasing consumption of foods that favour the increase of uric acid levels in the blood.

For this reason, the Italian Rheumatology Society's recommendations for gout management, published in the journal Reumatismo (2013; 65 (1): 5-24), point out that some foods, such as meat and seafood, are associated with increased uric acid levels. Numerous studies have shown that alcohol consumption is linked to an increase of uric acid, with a dose-dependent increase of the risk of gout. Another study has shown how different types of alcohol have different effects on the gout risk: daily beer consumption was linked to a high risk, while moderate wine consumption did not significantly increase the risk of gout.

Daily consumption of sugared beverages also increases the risk of developing gout, while milk products appear to offer protection against gout, in particular those with a low fat content, such as skim milk. Finally, recent studies suggest that vitamin C plays a protective role with respect to gout. As far as treatment is concerned, febuxostat has been shown to be an efficient uric acid-lowering drug in patients with gout, and in doses of 80 mg or higher it has shown greater efficacy in lowering uric acid levels in the short term than allopurinol at the maximum dose of 300 mg. Compared to allopurinol, treatment with febuxostat has also been shown to be safe in patients with mild or moderate kidney failure.

The Bologna symposium will also examine the mechanisms that underlie the damages uric acid causes on the cardiovascular system. «Urate crystals that deposit on the walls of blood vessels increase the possibility of atherosclerotic plaque formation; the synthesis processes of uric acid also contribute to this, leading to the formation of a large amount of oxidising substances that alter the lining of the vessels' walls and thus make these more susceptible to the onset of atherosclerosis» Borghi explains. «Various studies have provided evidence for a link between high

uric acid levels and diseases of the peripheral, carotid and coronary vessels as well as the onset of stroke, pre-eclampsia and vascular dementia. This link appears to be particularly close in individuals with high cardiovascular risk and in women. At the Bologna symposium, our goal is to provide new contributions to the understanding of the role of uric acid in the development of various diseases» Borghi concludes.

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