

Gout may be associated with vascular events such as stroke or heart attacks, particularly in women

Patients with gout – especially women – may be more likely to suffer from vascular diseases such as stroke, heart attack, angina or heart disease.

INTRODUCTION

Gout is a very common condition, affecting 2.5% of the population in the UK. The symptoms tend to flare every so often, developing over a few hours and causing severe pain in the joints which is made worse by any contact. It is caused by deposits of crystals of a substance called urate in the joints, which leads to inflammation. It is thought that urate crystals may also be deposited in the walls of blood vessels, which may explain the link between gout and vascular diseases.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors performed this study to see whether patients with gout were at any additional risk of suffering from vascular diseases affecting the heart (cardiovascular disease), brain (cerebrovascular disease) and legs (peripheral vascular disease) compared with people who do not have gout. They were also interested in whether this risk was different between men and women.

WHO WAS STUDIED?

The study looked at “typical” gout patients, over the age of 50 who had never suffered with a vascular condition before. Most gout patients in the UK are diagnosed and looked after by general practitioners (GPs) rather than by hospital consultants, who usually see only the most severely affected patients. For this reason the authors used electronic health records from UK general practice to try to answer the study question. Most of the UK population are registered with a GP, who stores the patient’s medical information electronically. A large number of GP practices share these records anonymously with databases for the purpose of medical research.

HOW WAS THE STUDY CONDUCTED?

This study used a database of electronic health records called the Clinical Practice Research Datalink, the largest such database in the world. The authors compared a random sample of over 8,000 patients who had gout but no previous vascular disease with a random sample of almost 40,000 patients of the same age, gender and registered GP who did not have gout or any previous vascular disease. They then calculated the time between diagnosis of gout and the onset of a vascular disease, such as heart attack or stroke, and compared the risk of this happening in those with gout to the risk in those without gout. They also compared the risks between men and women.

WHAT WERE THE MAIN FINDINGS OF THE STUDY?

This study found that both men and women with gout had an increased risk of developing heart disease and peripheral vascular disease – even after the authors made an allowance for predisposing risk factors such as high blood pressure. These risks were greatest in women, and a particularly strong association between gout and peripheral vascular disease was found in both men and women. Additionally, female gout patients were at increased risk of cerebrovascular disease, but male patients with gout were not.

HOW RELIABLE ARE THE FINDINGS?

Since anonymous electronic healthcare records were used, rather than actual patients, and because the only definitive test for gout is not available in general practice (where most gout patients are seen), it is possible that some of the patients may have been diagnosed with gout when in fact they did not have it. Similarly, because the vascular diseases in the study were also identified from the electronic record, it is possible that particular conditions may have been recorded incorrectly, or that vascular events had gone unrecorded for a number of reasons, and this could not be verified with the patient. Furthermore, because the information in the database was collected by GPs for the purposes of healthcare rather than research, there were some risk factors and patients characteristics that were not recorded routinely. These include levels of uric acid in the blood, levels of physical activity and family history of vascular diseases, and it is possible that these characteristics may have a bearing on the risk of vascular diseases associated with gout. However, the findings are consistent with those in previous studies, and the authors are confident that their conclusions are reliable. Additionally, the study has several strengths over previous reports, such as the large number of control patients and the exclusion of those

with a prior history of vascular events, which allowed the effect of gout itself to be more accurately investigated.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

The authors plan to share this information with patients with gout and doctors to highlight the increased risks of developing vascular diseases that have been identified. It is hoped that this evidence will influence GPs to consider vascular risk factors as part of routine care for patients with gout, in particular women with gout.

More work is planned to establish the effect of optimum management of both vascular risk factors and gout itself on the long-term health of gout patients, to try to clarify the nature of the relationship between gout and peripheral vascular disease, and understand the mechanism by which women are at greatest risk.

WHAT DOES THIS MEAN FOR ME?

These results mean that patients with gout, particularly women, are at increased risk of vascular diseases. It is important that gout patients consider the risk factors for vascular diseases that they themselves are able to modify, such as eating a healthy diet, taking regular exercise and stopping smoking, and seek help from their GP in monitoring and treating risk factors such as high blood pressure and high cholesterol. They should also ask their GP about screening for peripheral vascular disease, as this is not part of routine practice at present, but these findings suggest that patients with gout are at greatest risk of this form of vascular disease.

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