



**Gout is independently associated with a higher risk of atrial fibrillation**

## Impact of Gout on the Risk of Atrial Fibrillation

- Gout affects 1 in 40 people in the UK and is the most common inflammatory arthritis worldwide.
- It results in acute arthritis, chronic joint damage and peri-articular inflammation, and patients are at greater risk of developing a number of other conditions, including cardiovascular, metabolic and renal problems, leading to an increased mortality.
- Patients with atrial fibrillation (AF), an irregular heartbeat, have greater risk of heart failure and stroke, and an increased mortality.
- Stroke and many predictors for AF, such as excess uric acid in the blood (hyperuricaemia), are also common co-morbidities in gout patients, suggesting a possible link.
- The authors used data representative of the UK population to examine the risk of AF in gout patients compared to matched controls.

## Findings:

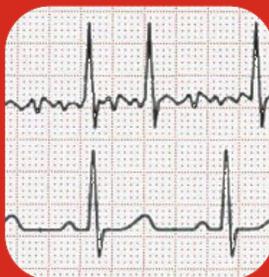
- Data was obtained for 45,378 patients with gout. They consumed more cigarettes and alcohol, had a higher BMI, and had higher prevalence of cardiovascular conditions than controls.
- Patients with gout had an adjusted OR (*odds ratio – the association between exposure and outcome*) of 1.45 (95%CI 1.29, 1.62), meaning they had a significantly higher likelihood of AF at time of initial diagnosis compared to controls.
- Gout patients also had a significantly higher probability of AF at 1, 2, 5 and 10 years after the time of initial diagnosis compared to controls (adjusted OR 1.09 [1.03, 1.16]).
- For example, after a median follow-up of 9 years, 3,534 gout patients had developed AF, compared to 2,322 control patients.
- Gout remained independently associated with AF, even when controlling for known predictors, other comorbidities, and medication use.
- The absolute risk of AF in gout patients is around 60% greater than matched controls.

## Reference:

Kuo C, Grainge MJ, **Mallen C**, Zhang W, Doherty M. Impact of Gout on the Risk of Atrial Fibrillation. *Rheumatol*. 2015. [ePub]. [<http://goo.gl/8bJHvE>]

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## Recommendations for Practice

Gout is independently associated with a higher risk of atrial fibrillation at diagnosis, and up to ten years later. Electrocardiogram should be part of the initial assessment for gout patients at diagnosis.

### What is NIHR CLAHRC West Midlands?

The Collaborations for Leadership in Applied Health Research and Care (CLAHRC) is a partnership between universities (Birmingham, Warwick, Keele and Aston) and a number of health and social care organisations in the West Midlands. We are funded by the National Institute for Health Research with a mission to undertake high-quality applied health research focused on the needs of patients to improve health services locally and beyond. For further information, visit:

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