

Palpitations are predictive of future atrial fibrillation: large population study

May 15 2012

A large cohort study has found that the strongest risk factors for atrial fibrillation in both men and women were a history of palpitations and hypertension. While hypertension is a well known risk factor for AF, the investigators note that "the impact of self-reported palpitations on later occurrence of AF has not been documented earlier".

Atrial [fibrillation](#) is currently the most common [cardiac arrhythmia](#) and is a major risk factor for [heart failure](#) (risk tripled), stroke (risk increased up to five times) and overall mortality (risk doubled). A recent [consensus statement](#) described AF as "one of the major common and chronic disorders in modern cardiology", adding that mortality and morbidity associated with AF "remain unacceptably high".

The emergence of palpitations as a risk factor for AF is reported today in the *European Journal of Preventive Cardiology*, with results from the Tromsø Study, a large prospective follow-up of the general population of this region of Norway. Participants in this study were recruited in 1994-95 and included all inhabitants in the region over the age of 25. After exclusions, 22,815 people aged between 25 and 96 were included and followed up for a mean time of 11.1 years. Mean age at baseline was 46 years.

Information on palpitations was included at baseline along with measurements of height, weight, blood pressure, heart rate, total cholesterol and high-density lipoprotein cholesterol. All subjects were cross-linked to the local diagnostic registry and to the national death

register for information on AF documented by electrocardiogram (ECG). Hospital records were searched for subjects with diagnoses of cerebrovascular or cardiovascular events but without a recorded registry diagnosis of arrhythmia.

Results showed that AF was recorded in 361 women (3.0%) and 461 men (4.2%) during the 11.1 years of follow-up, an incidence rate of 2.71 per thousand per year for women and 3.87 for men. Age, self-reported palpitations and [hypertension](#) were the strongest [risk factors](#) for AF.

Palpitations, which the [investigators](#) described as "frequent" in the total study group, increased the risk of AF in women by 62% (a hazard ratio of 1.62) and in men by 91% (HR 1.91).

The investigators also examined separately the predictors for palpitations and for AF (in order to exclude any common overlapping risk factors). This analysis found that for palpitations (but not for AF) several significant risk factors were related to lifestyle, while the most prominent risk factors for AF were biological (such as age, blood pressure, height, body mass index and diabetes). And although height, antihypertensive treatment and coronary heart disease were found to be risk factors for both palpitations and AF, the investigators nevertheless concluded "that palpitations are probably causally associated with atrial fibrillation".

"Although the occurrence of palpitations was assessed before a diagnosis of AF and the association remained significant even after adjustment for other AF risk factors, we cannot conclude with certainty that the association is causal," said first author Dr Audhild Nyrenes from the Department of Community Medicine, University of Tromsø, Norway. "However, in this case it is not unreasonable to propose a causal relationship. 'Palpitations' are used subjectively to describe irregular heart beats or accelerated heart rate, and it is likely that a proportion of

palpitations also represent cases of irregular heart rhythm, which is a main characteristic of AF."

A much cited US study of 190 patients presenting to hospital with palpitations concluded that cardiac arrhythmias were diagnosed in 40%, with the remainder of varied - or unknown - cause.(3) This and other studies suggest that palpitations can represent heterogeneous mechanisms, with highly different clinical implications.

"However," said Dr Nyynes, " palpitations per se are not harmful. They are in fact mostly harmless; the challenge is to detect those which might signify an underlying condition and future AF.

"Thus, while palpitations might be reduced by modifying lifestyle factors, such as alcohol consumption and smoking, both of which increase heart rate, it is still unclear if this will reduce the risk of AF. It was interesting that our study found no significant association between lifestyle factors and future AF - and only with palpitations."

However, the study did confirm that hypertension is a significant risk factor for AF. Raised blood pressure at baseline (defined as above 140/90 mmHg) almost doubled the risk of AF in women (HR 1.98) and increased by 40% (HR 1.40)) in men. The clinical implications of this, say the investigators, would be "to emphasise the importance of adequate treatment of high [blood pressure](#)". They also add that subjects with [palpitations](#) could have paroxysms of AF, and should also be investigated further, with prolonged ECG monitoring.

Provided by European Society of Cardiology

Citation: Palpitations are predictive of future atrial fibrillation: large population study (2012, May 15) retrieved 6 May 2024 from

<https://medicalxpress.com/news/2012-05-palpitations-future-atrial-fibrillation-large.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.