SYMPTOM FREQUENCY IS A POOR PREDICTOR OF ONSET OF PAROXYSMAL ATRIAL FIBRILLATION IN A POPULATION PRESENTING WITH PALPITATIONS

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Purpose: Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia and paroxysmal AF (PAF) comprises approximately half of all AF cases. PAF poses a particular diagnostic challenge given its intermittency. A physician’s choice of investigational device is largely based on symptom frequency although it has been widely established that a significant proportion of PAF episodes are asymptomatic. We aim to determine whether symptom frequency is a reliable method to select a choice of investigational device in a population presenting with palpitations.

Methods: Patients meeting the following criteria were entered into the study: palpitations; aged \( \geq 40 \) years; no previously documented atrial arrhythmia; sinus rhythm on a 12-lead ECG and no significant electrolyte disturbance. A brief medical history was taken to establish patients’ palpitation frequency into the following categories: at least daily, weekly, monthly or on a less frequent basis. Participants were issued with an automated cardiac event recorder (R. Test Evolution 4, Novacor). They also used a handheld ECG monitor (OMRON Portable ECG Monitor HCG-801), recording 30-second segments twice-daily and with relevant symptoms, for a 12-week period. Recordings were analysed by a blinded cardiologist.

Results: We recruited 59 consecutive eligible participants (age \( = 68 \pm 4 \) years; 42 female). 92\% of participants completed the study and 99\% of recordings were suitable for analysis. Atrial arrhythmias were detected in 21 patients (36\%); specifically, 29\% were diagnosed with AF, 5\% with atrial flutter and 2\% with atrial tachycardia. Of these patients 33\% experienced palpitations daily, 38\% weekly, 5\% monthly and 24\% less frequently. Based on the patients’ history, the first episode of AF occurred as predicted in only 33\% of patients – see figure 1 (highlighted in red). Importantly 38\% of first AF episodes were identified less frequently than predicted and would have been missed if device selection were based exclusively on symptom frequency.

Conclusions: Symptom frequency is a poor predictor for timing of first incidence of PAF. A patient’s history cannot therefore be relied upon to select an appropriate investigational device in order to diagnose an atrial arrhythmia.

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{figure1.png}
\caption{Symptom frequency and time of PAF onset.}
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