Reviewer's report

Title: Predictors and prognosis of paroxysmal atrial fibrillation in general practice in the UK.

Version: 1 Date: 15 March 2005

Reviewer: Lars Frost

Reviewer's report:

General

The investigators did a study in the UK General Practice Research Database (GPRC) with three purposes:

1. To evaluate if paroxysmal atrial fibrillation (AF) is associated with excess mortality (case-control design).
2. To examine the rate of progression from paroxysmal (PAF) to chronic AF (CAF).
3. To identify risk factors for the progression from PAF to CAF.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The investigators found that PAF was associated with heart valve disease, ischemic heart disease, and heart failure, which are all conditions associated with an increased risk of mortality. Surprisingly, there was no excess mortality in patients with PAF compared to controls selected in the GPRC.

I do not like this analysis because there was no control for comorbid conditions, because the investigators did only control for age and sex. Furthermore, there is a very high risk of bias, because controls in the GPRC do not represent the background population, especially because it was a requirement that control subjects had to be medicated to be included.

The authors do not define CAF in the introduction. It is of major importance that we have information with respect to the definition of PAF and CAF in the introduction, especially as many investigators would consider PAF as CAF, if there were repetitive or recurrent episodes of AF.

We need to know how the GP’s decided the occurrence of CAF during follow-up. Was patient follow-up performed with physical examination, ECG, and Holter-recordings? If not, how was the GP able to differentiate between PAF and CAF? How did the GP’s decide on the one-week criteria? Could the decision for admission for acute/early DC-cardioversion be influenced by patients age, sex and comorbid conditions? If there were no attempt for DC-cardioversion, then a case would more likely be classified as chronic.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Information on hypertension should be added to Table 1.

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Discretionary Revisions (which the author can choose to ignore)
**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes

**Declaration of competing interests:**

I declare that I have no competing interests.