Reviewer's report

Title: Occurrence and quality of anticoagulant treatment of chronic atrial fibrillation in primary health care in Sweden: a retrospective study on electronic patient records

Version: 1 Date: 23 November 2003

Reviewer: alan go

Reviewer's report:

General

This revised manuscript has improved significantly with regard to focusing on the correct population of AF patients along with more standard reporting of prevalence and treatment estimates. However, there are still several important aspects that should be addressed.

Discretionary Revisions (which the author can choose to ignore)

Pg 4 Para 2: Fourth sentence--add in recent reference by Hylek EM et al. on anticoagulation intensity and stroke severity (New England Journal of Medicine, Sept 11, 2003) which provides updated information on INR level and risk of adverse stroke-related outcomes and intracranial hemorrhage risk.

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

Pg 4 Para 1 (Background): Change “effectiveness” to “efficacy,” as efficacy is the more appropriate term for describing results from randomized clinical trials.

Specific issues in the Abstract:

Methods: The number of patients in the population is listed as 75,146, but listed as 75,145 in the Methods Section of the manuscript. This should be clarified.

Results: Change first sentence to, “In total, 419 patients had DIAGNOSED chronic atrial fibrillation…

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

1. The authors should provide more clinical information on the AF patient sample. If not available, then an important limitation of the study that should be acknowledged is the lack of clinical features regarding potential contraindications to anticoagulation as well as the presence or absence of risk factors for stroke. If the data are available, then it should be included in the manuscript and multivariable logistic regression performed to attempt to identify the predictors of prevalent and incident warfarin use.

2. The authors should clarify what they mean by “chronic atrial fibrillation.” Based on recently suggested classification schemes, “chronic” should be replaced with either persistent, permanent, or paroxysmal. Based on the data presented, it was unclear which types of patients with AF were included and if a particular type, how the diagnosis was defined.
3. The estimate given in the Background Section (pg. 4) for fatal or major bleeding complications on anticoagulation is higher than all of the AF trials and the large majority of observational studies. Ref. 13 is not representative of the existing literature and the correct range should be included so as not to mislead the reader.

4. The use of linear interpolation is a significant improvement for examining anticoagulation control, but the authors should clarify whether INR time included only use of INR values separated by 8 weeks apart or less, which is often used as the upper cutoff to interpolate between any two consecutive INR values. If INR values >8 weeks apart were included, the interpolation analyses should be redone with those INR time periods <=8 weeks apart removed.

5. In the Results section, the first paragraph is confusing as it is not always clear what denominator was used and whether it was appropriate. While the overall observed age-adjusted prevalence of AF was 0.62%, the proportion of cases age 65 years or older AMONG those with atrial fibrillation should be given in addition to the age-stratified AF prevalence in their population, which is already shown in Table 1. Also, in the last sentence about new starts of anticoagulation, the denominator should be those patients with AF who were not initially on warfarin, rather than the entire AF and non-AF population at the centers.

6. In the Results section, the paragraph describing results in Table 1 should comment on the relationship between prevalence of AF and increasing age, as well as the declining use of warfarin with older age. The consistency and magnitude of these findings should also be commented on in the Discussion Section in relation to the multiple previous U.S. and European studies that have addressed this issue.

7. In addition to the limitations identified, they should acknowledge that their estimates of AF in the population are, in fact, significantly lower in the older patients (i.e., 75 years or older) compared with many previous studies, suggesting that there may be underdiagnosis of AF in their PHCs, under-documentation of identified AF, and/or selection bias in the types of patients seen in the PHCs. These issues should be addressed. Their data also do not allow them to conclude that the point estimate of 50% treatment is likely the maximum number of eligible patients since they do not report information on eligibility for anticoagulation.

8. The Discussion Section is straightforward, but under-referenced, especially with regard to relevant, often larger studies in both the U.S. and Europe.

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 limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests: None