

Mortality in Patients With Atrial Fibrillation and Heart Failure

We read with interest the paper by Nieuwlaet et al. (1) on patients with atrial fibrillation (AF) and heart failure (HF) from the observational Euro Heart Survey. We have recently reported a large series of patients (n = 1,269) with both AF and HF and a similar number of deaths (n = 247) during follow-up (2).

The Euro Heart Survey was a declarative multicenter registry, whereas we performed a single-center systematic continuous analysis retrieving information from the computerized codification system filled in for each patient using the International Classification of Diseases-10th Revision of the World Health Organization (3). It is interesting to note that in both studies the characteristics of the patients were very similar in many aspects (type of AF, association or not with left ventricular systolic dysfunction, medication during follow-up), although the way of collecting a large amount of data was somewhat different.

However, and in contrast to the results presented by Nieuwlaet et al. (1), we found that in unselected patients with AF and HF, treatments with beta-blocker alone or with beta-blocker plus digoxin were associated with a significant decrease in the risk of death. We think this may have some interest because very few studies have been published to date addressing the effect of beta-blockers in HF patients having AF. Beyond the older age of the patients and the continuous collection of data in our study, we do not have clear explanation for these different results. We were somewhat surprised by the listing of the multivariable determinants of all-cause mortality in patients with AF and HF in the Euro Heart Survey because it appears that a major bleeding is presented as a strong predictor of death during follow-up. The parameters included in this type of multivariate analysis should only include baseline characteristics of the patients. A severe event during follow-up is obviously associated with a higher risk of mortality. Because a history of major bleeding at baseline is not presented, we are wondering if Nieuwlaet et al. (1) have included a major bleeding during follow-up as a predictor of mortality. If this is the case, this inappropriate way of performing the analysis may have affected the final results on the predictors of all-cause mortality.

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REFERENCES

1. Nieuwlaet R, Eurlings LW, Cleland JG, et al. Atrial fibrillation and heart failure in cardiology practice: reciprocal impact and combined management from the perspective of atrial fibrillation: results of the Euro Heart Survey on atrial fibrillation. *J Am Coll Cardiol* 2009;53:1690-8.
2. Fauchier L, Grimard C, Pierre B, et al. Comparison of beta blocker and digoxin alone and in combination for management of patients with atrial fibrillation and heart failure. *Am J Cardiol* 2009;103:248-54.

3. Implementation of the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10). *Epidemiol Bull* 1997;18:1-4.

Reply

We thank Dr. Smit and colleagues and Drs. Fauchier and Gorin for their interest in our paper (1) regarding the characteristics, management, and prognosis of patients with the combination of atrial fibrillation (AF) and heart failure (HF) in the Euro Heart Survey.

First, we would like to clarify that the variable "major bleeding" in the multivariable analyses concerns a history of major bleeding at baseline, rather than major bleeding during study follow-up. We want to congratulate Fauchier et al. (2) on their interesting study showing improved survival of patients with AF and HF who receive a beta-blocker. However, we did not find a benefit of beta-blockers in our prospective survey, which was also the case in subanalyses of the CIBIS II (The Cardiac Insufficiency Bisoprolol Study II) (3) and MERIT-HF (Metoprolol CR/XL Randomized Intervention Trial in Congestive Heart Failure) (4) trials as pointed out by Dr. Smit and colleagues. There are multiple potential reasons for these different results, among which are study setting, selection of the population, study design, and follow-up duration. Only randomized controlled trials specifically designed to test the effect of beta-blockers among these patients can clarify this issue. The same argument holds for the rate control target issue as raised by Dr. Smit and colleagues. The AF guidelines indicate that rhythm versus rate control studies usually used a rate control target of ≤ 60 to 80 beats/min and is reasonable (5). However, it is unknown whether aiming for ≤ 80 beats/min produces superior therapeutic effects compared with a lower or higher target. The RACE II (Rate Control Efficacy in Permanent Atrial Fibrillation) trial (6) will indeed shed more light on this issue for permanent AF patients.

No or inconclusive research evidence can be a reason for suboptimal implementation of therapies. Until stronger evidence is available, we will have to rely on guideline recommendations optimally weighing the evidence as extrapolated from more general trial patient groups, observational studies such as ours, and expert opinion. Inadequate guideline adherence is a multifactorial problem of which lack of firm evidence is an important, but not the only, aspect. Ever-growing research evidence will clarify management issues that are of importance, but implementing this evidence optimally in local practice is another issue (7). Understanding the causes for gaps between guidelines and practice and finding effective ways to close them is an essential next step in the continuous feedback loop between research and practice (8). We hope that our survey and the discussions by Dr. Smit and colleagues and Drs. Fauchier and Gorin will stimulate further research to improve the care and outcomes for patients with AF and HF.

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