Introduction

- Atrial fibrillation (AF) is the most common cardiac arrhythmia. The prevalence of AF is 0.4% in the general population and increases with age up to 6-8% in octogenarians.  
- In Switzerland, approximately 68,000 persons are in atrial fibrillation, and in the EU countries 3.5 millions.  
- Atrial fibrillation (AF) is a major independent risk factor for stroke. AF is most commonly associated with nonvalvular cardiovascular disease and is especially frequent among the elderly.  
- The annual risk for stroke in patients with AF is approximately 5% with a wide range depending on the presence of additional risk factors.  
- The decline in stroke incidence and mortality in the U.S. over the past 20 years is reaching a plateau, and the number of strokes may actually start to increase as the population ages.  
- CHADS2 (Congestive heart failure, Hypertension, Age, Diabetes, Stroke) is a validated assessment tool for cardioembolic stroke in AF.  
- Ischemic stroke rates increase from 1.9 to 18.2 events per 100 patient-years with CHADS2 scores of 0 and 6, respectively.  

Objective

- The purpose of this cross-sectional study was to examine the risk of stroke and the prevention of stroke in Europe (United Kingdom, France, Germany, Italy, Spain), amongst diagnosed atrial fibrillation patients.  

Methods

Study Design

- Data were obtained from the 2008 European National Health and Wellness Survey (NHWS), Consisting of 53,524 adults in the UK, France, Germany, Italy and Spain.  
- The NHWS is a semiannual, annual Internet-based survey developed and collected by Consumer Health Sciences (now Kantar Health) in Europe since 2002, of adults 18+ years of age. The survey sample is drawn from an Internet panel maintained by Lightspeed Research and covers information on individual demographic characteristics, medical history, healthcare utilization, attitudes, behaviors, and outcomes.  
- NHWS is currently conducted in the United Kingdom, France, Germany, Italy, Spain, China, Japan, and the United States annually.  
- The inclusion criterion for analysis included self-reported physician diagnosis with atrial fibrillation.  

Study Measures

- The risk of stroke was assessed using the CHADS2 score (congestive heart failure, hypertension, age > 75 years, diabetes mellitus, 1 point each; prior stroke or transient ischemic attack, 2 points).  
- A score of 0 was classified as low risk of having stroke, a score of 1 was classified as moderate risk and a score of 2 or more was classified as high risk of stroke.  

Statistical Analyses

- Bivariate analyses of respondent demographics, and comorbidities, were evaluated by chi-square tests for categorical variables and t-tests for continuous variables.  

Results

Prevalence Estimates

- Among the 53,524 EU NHWS respondents, 0.96% (n=506) self-reported being diagnosed with atrial fibrillation.  
- Differences in prevalence estimates were noted for the individual European countries. Italy with the highest prevalence rate (1.6% of atrial fibrillation and Spain having the lowest prevalence of 0.3%. (See Figure 1)  

Diagnosed Atrial Fibrillation patients were more likely to be male (71.1%), drink alcohol (76.5%) and be married (68.9%). They have an average age of 61.6 years and only 33.3% of patients had a college education. (See Table 1)  

Stroke risk was assessed with CHADS2, an index summing the presence of congestive heart failure, hypertension, age of 75 years+, diabetes mellitus, and history of prior stroke or transient ischemic attack (the latter weighted twice). Patients were classified as low- (CHADS2 = 0), moderate- (CHADS2 = 1), and high- (CHADS2 = 2+) risk patients.  

Of the 508 diagnosed AF patients, 198 (39%) were classified as low risk, 158 (31.1%) as moderate risk, and 152 (29.9%) as high risk for stroke. (See Figure 2)  

In the EU, 42.8% of diagnosed AF patients at high risk for stroke took no preventative steps to prevent stroke and only 27.4% of the total diagnosed AF patients actually took step(s) to prevent stroke.  

Significant differences emerged in the use of any preventative steps between low- (23.7%), moderate- (35.4%), and high- (57.2%) risk patients, p<0.05.  

No significant differences emerged between the three risk groups on regular exercise and aspirin use.  

Amongst high-risk patients, lowering blood pressure (42.8%) and lowering cholesterol (40.8%) were the most common steps taken.  

Coumadin/Warfarin use was higher among high- (21.1%) vs. moderate- (9.8%) and low-risk (3.0%) patients, p<0.05. (See Table 3)  

Conclusions

- In Europe, 42.8% of diagnosed AF patients at high risk for stroke, assessed using CHADS2, scores took no preventative steps, and no significant differences between groups were found on regular exercise and aspirin use.  
- The American College of Chest Physicians recommends the use of warfarin in patients with a CHADS2 score of 2 or higher and suggests warfarin be used in patients with a score of 1.  
- Current practice guidelines for stroke prophylaxis recommend warfarin (target International Normalised Ratio 2.5: range 2.0 to 3.0) for AF patients at high risk for stroke including those over 75 years of age or younger patients with additional risk factors. Aspirin should be reserved for low risk patients or those unable to take warfarin. Although these recommendations are strongly supported by the clinical trial evidence, studies show that many patients are not receiving appropriate antithrombotic therapy. In particular, warfarin is underutilized in high risk elderly patients.  
- Only 1 in 5 high-risk patients took coumadin/warfarin, while many more could benefit from prophylactic anticoagulation therapy. Higher risk correlated with higher prevention, but there remains an unmet need for increased targeted treatment of high-risk AF patients.  

References

1. Matteo HP, Schwarzmenn M, Seiler Ch. [Atrial fibrillation and stroke]. TherUmsch. 2003 Sep;60(9):527-34.  

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