FPIN's Clinical Inquiries

Evaluation of Asymptomatic Atrial Fibrillation

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Clinical Inquiries provides answers to questions submitted by practicing family physicians to the Family Physicians Inquiries Network (FPIN). Members of the network select questions based on their relevance to family medicine. Answers are drawn from an approved set of evidence-based resources and undergo peer review. The strength of recommendations and the level of evidence for individual studies are rated using criteria developed by the Evidence-Based Medicine Working Group (http://www.cebm.net/?o=1025).

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Clinical Question

Should asymptomatic atrial fibrillation be evaluated differently than symptomatic atrial fibrillation in stable patients?

Evidence-Based Answer

In hemodynamically stable patients without acute chest pain, the evaluation and treatment of atrial fibrillation should not change based on symptoms alone. (Strength of Recommendation: A, based on multiple cohort studies.) As many as 75 percent of episodes of atrial fibrillation are not recognized by patients, and it is not uncommon for asymptomatic episodes to last more than 48 hours, which increases the risk of thromboembolic complications.[1]

Evidence Summary

Several studies have concluded that patients with atrial fibrillation are often asymptomatic.[1-3] In a prospective 19-month cohort study, 110 patients with a history of atrial fibrillation were monitored with continuous electrocardiography (ECG) using an implantable device (mean period of more than 18 months).[1] Of these patients, 59 percent had at least one period of asymptomatic device-documented atrial fibrillation, and 38 percent had asymptomatic episodes lasting more than 48 hours. A large multigroup randomized controlled trial that followed patients with symptomatic atrial fibrillation for one year found that only 37 percent of symptom-triggered ECG recordings showed atrial fibrillation, whereas more than 61 percent showed sinus rhythm.[4] Of the 6,165 ECG recordings that showed atrial fibrillation, only 46 percent of patients had symptoms during these episodes.

Another randomized controlled trial that included 4,060 patients with atrial fibrillation found that asymptomatic patients (12 percent) had higher rates of cerebrovascular disease compared with symptomatic patients (17 versus 13 percent; $P = .005$), but a lower incidence of coronary artery disease (28 versus 40 percent; $P < .0001$).[5] A subsequent analysis of the outcomes of this investigation in symptomatic (n = 3,576) versus asymptomatic (n = 481) patients included death, disabling stroke, disabling anoxic encephalopathy, major central nervous system hemorrhage, and cardiac arrest.[5] After adjusting for left ventricular ejection fraction and history of coronary artery disease or congestive heart failure, there was no statistically significant difference in mortality between the two groups ($P = .67$).[5] Additionally, the adjusted analysis of secondary endpoints revealed no significant difference between symptomatic and asymptomatic patients ($P = .34$). Hence, given the absence of a more favorable prognosis, patients with atrial fibrillation should be treated for underlying heart disease, regardless of the presence or absence of symptoms. Asymptomatic patients had less coronary artery disease, congestive heart failure, and pulmonary disease, and were more likely to have normal ventricular function as assessed by echocardiography, a slower average heart rate, increased exercise tolerance, and a higher global estimate of quality of life.[3]

Recommendations from Others

Joint guidelines from the American College of Cardiology, the American Heart Association, and the European Society of Cardiology recommend that regardless of symptoms,

the minimum evaluation of atrial fibrillation should include a clinical history and physical examination; ECG; transthoracic echocardiography; and blood testing of thyroid, renal, and hepatic function.[2] Additional testing (chest radiography, exercise testing, Holter monitoring, event recording, transesophageal echocardiography, ambulatory monitoring, and electrophysiologic studies) may be necessary. These guidelines also recommend the use of a risk stratification scheme when deciding if and what type of anticoagulation should be used to prevent thromboembolism. The presence or absence of symptoms is not included in any risk stratification schema presented in these guidelines.

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Author disclosure: No relevant financial affiliations to disclose.

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