Lone Atrial Fibrillation

Good, Bad, or Ugly?

Lars Frost, MD, PhD

The term lone auricular fibrillation was introduced by Evans and Swann in 1953. Lone atrial fibrillation has not been defined with any consistency, mainly because of the introduction of echocardiography and changes in criteria for hypertension. Currently, lone atrial fibrillation is considered a nosographic entity, only when clinical and echocardiographic evidence of cardiovascular or pulmonary disease has been ruled out. Conditions such as hypertension, diabetes, hyperthyroidism, acute infections, recent cardiothoracic or abdominal surgery, and systemic inflammatory diseases should be excluded also. There is no consensus as to whether atrial fibrillation occurring in patients with sick sinus syndrome should be considered lone atrial fibrillation.

Several other problems are associated with “threshold decision making.” Should we consider atrial fibrillation caused by overweight or obesity as lone atrial fibrillation? How little alcohol has to be consumed before we call the patient a “lone atrial fibrillator”? How much exercise must be performed before we think atrial fibrillation may be caused by excessive sporting activities and therefore should not be classified as true lone atrial fibrillation? And what about those individuals who experience exercise-induced atrial fibrillation?

Perhaps we should stop using terms such as idiopathic or lone because in the end we will find a cause. Increasing knowledge is accumulating on genetics of atrial fibrillation. Should we classify patients with a strong family history of atrial fibrillation as patients with lone atrial fibrillation? There may also be gene-environment interactions that may explain some cases of so-called lone atrial fibrillation, but we have not yet discovered them, presumably because familiar atrial fibrillation is a heterogenetically disorder caused by >1 gene. Thus, the diagnosis of lone atrial fibrillation seems a disintegrating clinical entity with an increasing number of subtypes of lone atrial fibrillation as our knowledge of causes of atrial fibrillation accumulates. So, is there anything left for a go-home message?

Scientists from the Mayo Clinic (Rochester, Minn) have for >5 decades examined and followed up patients with lone atrial fibrillation, and in this issue of Circulation, they present new data on long-term progression and outcomes with aging in patients with lone atrial fibrillation. These studies from the Mayo Clinic represent excellent and unique studies that will be difficult to replicate because the mean follow-up now exceeds 25 years.

Patients included in the Mayo Clinic study had a first episode of atrial fibrillation between 1950 and 1980 and had no concomitant heart disease, hypertension, hyperthyroidism, chronic obstructive pulmonary disease, or noncardiac disease that potentially could shorten life expectancy. Patients with atrial fibrillation related to surgery, trauma, or acute medical diseases also were excluded, and patients had to be <60 years of age to be included.

What are the important messages from this study? First, surprisingly few patients were classified as having lone atrial fibrillation. According to the Mayo Clinic, we are dealing with ~2% of the total population of patients with atrial fibrillation. However, a very low proportion of lone atrial fibrillation in the total population of patients with atrial fibrillation was also observed by others. Patients with lone atrial fibrillation were predominantly male (78%), and young, with a mean age of 44.2 years when diagnosed. Very few patients were in permanent atrial fibrillation, and the 30-year cumulative probability of progression to permanent atrial fibrillation was as low as 29% among those who had paroxysmal or persistent atrial fibrillation at baseline.

Second, the overall survival was similar to that of the age- and sex-matched Minnesota population. Most important, all patients who subsequently had a cerebral event developed ≥1 risk factors for stroke during follow-up before the occurrence of stroke. However, the only independent risk factor for stroke identified in the present study was increasing age. But, if the study power had matched the study ambitions, we would have seen a confirmation of what is already known for the population at large: Increasing age, development of hypertension, congestive heart failure, and diabetes are risk factors for stroke also among patients with lone atrial fibrillation.

Thus, there are 2 very important lessons to be learned. Patients with lone atrial fibrillation have a normal life expectancy, and they should be offered regular follow-up treatment.
examinations to evaluate if and when they might be appropriate candidates for aspirin or oral anticoagulation according to current clinical guidelines.2

The excellent survival in patients with lone atrial fibrillation implies that any treatments associated with risk of serious adverse events such as long-term antiarrhythmic drug treatment or ablation should be offered only after a careful medical history is obtained and after the patient is informed about the superb prognosis without and any risk associated with such treatment.

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Disclosures
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References

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