



Cardiovascular Risk Factors and Atrial Fibrillation: What is the Link?

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Atrial fibrillation is a common cardiac arrhythmia. It is well known to occur in older patients with comorbid conditions such as congestive heart failure and ischemic heart disease.¹⁻³ In these otherwise sick individuals it is associated with higher long-term morbidity and mortality.⁴

In their paper published in the February issue of JAFIB, Dr. Barrios and colleagues further examine the association between atrial fibrillation, classical coronary risk factors, proven cardiovascular preventive therapies and end-organ damage in 2024 patients with documented hypertension and coronary heart disease. Patients were stratified as having or not having atrial fibrillation according to the baseline 12-lead ECG which was also used to derive heart rate. The presence of end-organ damage was coded based on clinical history. Overall about 17% of the patients had atrial fibrillation. These patients were generally older with an equal prevalence between genders, contrary to male predominance reported in other studies.¹ Patients with atrial fibrillation had a somewhat lower ejection fraction and were more likely to be sedentary and diabetic and less likely to suffer from dyslipidemia. Many more of these patients had left ventricular hypertrophy, congestive heart, peripheral arterial disease, renal impairment and history of stroke. Their heart rate was generally faster than that of the sinus rhythm patients. According to their risk profile, more of the atrial fibrillation patients were anticoagulated and treated for diabetes and fewer were treated for dys-

lipidemia. The likelihood of being on a diuretic, ARB or alpha-blocker was higher among patients with atrial fibrillation. Surprisingly few patients in the registry had good control of their risk factors with little appreciable difference between patients with and without AF. The authors then did an interesting analysis further stratifying patients with atrial fibrillation into cohorts based on heart rate <63 bpm, 63-82 bpm and >82 bpm. The comparison between sinus rhythm patients and those with AF among patients with baseline heart rate > 82 bpm parallels main study findings. On the other hand, the comparison between AF patients stratified by heart rate reveals several interesting findings: higher heart rate seemed associated with current smoking status, left ventricular hypertrophy, higher blood pressure and less adequate blood pressure control, lower use of beta blockers, higher use of calcium channel blockers and to a lesser extent, history of peripheral arterial disease. Since no outcome measures are reported, it is impossible to comment on the association between atrial fibrillation and cardiovascular mortality in this study.

All in all this study re-iterates the well-known association between atrial fibrillation and cardiovascular disease. The findings suggest better rate control in AF patients treated with beta-blockers compared to calcium channel blockers as well as a good association between heart rate and blood pressure control in these patients. As many other

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epidemiologic studies of chronic disease management in the real world, Dr. Barrios et al re-emphasize the importance of better adherence to clinical practice guidelines and focus on cardiovascular risk control.

References

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