



# Alcohol abstinence reduces A-fib burden in drinkers

A recent Australian study demonstrated a significant reduction in A-fib recurrence and burden among regular drinkers who abstained from alcohol.

## PRACTICE CHANGER

Counsel patients with paroxysmal or persistent atrial fibrillation (AF) who drink moderately ( $\geq 10$  drinks per week) that they can reduce their time in AF, as well as their overall recurrence of AF, by decreasing their alcohol consumption by half or more.

### STRENGTH OF RECOMMENDATION

**B:** Based on a well-performed randomized controlled trial<sup>1</sup>

Voskoboinik A, Kalman JM, De Silva A, et al. Alcohol abstinence in drinkers with atrial fibrillation. *N Engl J Med.* 2020;382:20-28.

## ILLUSTRATIVE CASE

A 61-year-old man with hypertension and paroxysmal AF presents to your office shortly after experiencing his third episode of AF in the past 6 months. He describes these episodes, which last for several days, as “just awful,” noting that when he experiences AF, he has fatigue, palpitations, and shortness of breath and “can’t stop paying attention to my heart.” The patient, who has a body mass index of 32, consumes more than 15 alcoholic drinks per week. What can you recommend to him that will decrease his likelihood of experiencing more episodes of AF?

**A**F is the most common sustained cardiac arrhythmia. It is associated with significant morbidity and mortality. Known risk factors include obesity, physical inactivity, sleep apnea, diabetes, and hypertension.<sup>2</sup>

According to the Centers for Disease Control and Prevention, an estimated

12.1 million people in the United States will have AF by 2030. In 2018, AF was mentioned on more than 183,000 death certificates and was the underlying cause of more than 26,000 of those deaths.<sup>3</sup> AF is the primary diagnosis in 450,000 hospitalizations annually,<sup>4</sup> and the death rate from AF as the primary or contributing cause of death has been rising for more than 2 decades.<sup>3</sup>

More than 50% of Americans report alcohol consumption within the past month.<sup>5</sup> Although alcohol use is associated with new and recurrent AF, only limited prospective data show a clear and causal association between abstaining from alcohol and decreasing AF recurrence.

## STUDY SUMMARY

### Reduction in AF recurrence and total AF burden following alcohol abstinence

This multicenter, prospective, open-label, randomized controlled trial (N = 140) from 6 sites in Australia evaluated the impact of alcohol abstinence on both the recurrence of AF and the amount of time in AF. Study participants were ages 18 to 85 years, consumed 10 or more standard alcohol-containing drinks per week, had paroxysmal or persistent AF, and were in sinus rhythm at the time of enrollment, regardless of antiarrhythmic therapy. Exclusion criteria included alcohol dependence or abuse, severe left ventricular systolic dysfunction (ejection fraction < 35%), clinically significant noncardiac illness, and/or coexisting psychiatric disorder.<sup>1</sup>

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➤ **The largest challenge to implementation of this intervention is most likely the willingness of patients to cut their alcohol consumption.**

After a 4-week run-in period, patients were randomized to either an abstinence or a control group in a 1:1 fashion. Patients enrolled in the abstinence group were encouraged to abstain from alcohol consumption for 6 months and were provided with written and oral instructions to assist with abstaining. Control group patients continued their same level of alcohol consumption. Comprehensive rhythm monitoring occurred for all patients after randomization.

Alcohol consumption was reported by both groups using a weekly alcohol diary, supplemented with a visual guide showing pictures of standard alcohol drinks. For the abstinence group, random urine testing for ethyl glucuronide (an alcohol metabolite) was possible if no alcohol intake was reported. Primary outcomes during the 6-month study included recurrence of AF and total AF burden (percentage of time in AF).

Secondary outcomes included hospitalizations for AF, AF symptom severity, and change in weight. Blood pressure, quality-of-life, and depression scores were missing for > 35% of patients.<sup>1</sup>

Patients were randomized evenly to the control and abstinence groups. The typical patient was an overweight male in his early 60s with paroxysmal AF, who was taking an antiarrhythmic agent. Patients in the abstinence group decreased their alcohol consumption from 16.8 to 2.1 drinks per week (87.5% reduction; mean difference = -14.7; 95% CI, -12.7 to -16.7). Patients in the control group reduced their intake from 16.4 to 13.2 drinks per week (19.5% reduction; mean difference = -3.2; 95% CI, -1.9 to -4.4).<sup>1</sup>

AF recurred in 53% vs 73% of the abstinence and control groups, respectively, with a longer period before recurrence in the abstinence group than in the control group (hazard ratio = 0.55; 95% CI, 0.36-0.84;  $P = .005$ ; number needed to treat = 5). The AF burden was also lower in the abstinence group (0.5%; interquartile range [IQR] = 0.0-3.0) than in the control group (1.2%; IQR = 0.0-10.3;  $P = .01$ ). The abstinence group had a lower percentage of AF hospitalizations compared with the control group (9% vs 20%), and fewer patients reporting moderate or severe AF symptoms (10% vs 32%). In addition, the ab-

stinence group lost 3.7 kg more weight than did the control group at 6 months.<sup>1</sup>

#### WHAT'S NEW

##### Objective new evidence for effective patient counseling

Alcohol consumption and its association with the onset and recurrence of AF has been documented previously.<sup>6</sup> This study was the first to prospectively examine if abstaining from alcohol reduces paroxysmal AF episodes in moderate drinkers.

The study identified clinically meaningful findings among those who abstained from alcohol, including decreased AF recurrence rates, increased time to recurrence, and lower overall AF burden. This provides objective evidence that can be used for motivational interviewing in patients with paroxysmal AF who may be receptive to reducing or abstaining from alcohol consumption.

#### CAVEATS

##### The narrow study population may not be widely applicable

The study population was predominantly male, in their seventh decade of life (mean age, 61), and living in Australia. Rates of AF and symptomatology differ by gender and age, making this information challenging to apply to women or older populations. The study excluded patients with alcohol dependence or abuse, left ventricular systolic dysfunction (ejection fraction < 35%), coexisting psychiatric disorders, and clinically significant noncardiac illnesses, limiting the study's generalizability to these patient populations. Overall, AF recurrence was low in both groups despite the intervention, and the study did not evaluate the efficacy of the counseling method for abstinence.

Since publication of this article, a prospective cohort study of approximately 3800 Swiss patients with AF evaluated the effect of alcohol consumption on the rate of stroke and embolic events. That study did not find statistically significant correlations between patients who drank no alcohol per day, > 0 to < 1, 1 to < 2, or ≥ 2 drinks per day and their rate of stroke.<sup>7</sup> However, this study did not

specifically evaluate the rate of AF recurrence or time spent in AF among the cohort, which is clinically meaningful for patient morbidity.<sup>1</sup>

### CHALLENGES TO IMPLEMENTATION

#### Patient willingness to cut alcohol consumption may be limited

The largest challenge to implementation of this intervention is most likely the willingness of patients to cut their alcohol consumption. In this study population, 697 patients were screened for enrollment and met inclusion criteria; however, 491 patients (70.4%) were not willing to consider abstinence from alcohol, and after the run-in phase, another 17 declined randomization. Many primary care physicians would likely agree that while it is easy to encourage patients to drink less, patient adherence to these recommendations, particularly abstaining, is likely to be limited. **JFP**

#### ACKNOWLEDGEMENT

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## LETTERS

#### Let's be more careful about the data—and commentary—we publish

In a recent letter to the editor, “25-hydroxyvitamin D concentration is key to analyzing vitamin D's effects” (*J Fam Pract*. 2021;70:472), Dr. Grant links vitamin D supplementation with important health outcomes. He concludes that the positivity rate of SARS-CoV-2 was only 5.9% in people with higher concentrations of 25(OH)D vs 12.5% in those with lower concentrations. This is a flawed conclusion on the face of it, because the great confabulatory factor is behavior. Is it possible that those more likely to take supplemental vitamin D do so as a result of overall healthier lifestyles and choices (eg, vaccinations)? As health care representatives, we must be



very careful about the data we publish and the commentary we attach to it, lest we advertise inadvertent follies. I see so much of that in our “peer-reviewed literature.”

I came to medicine as a chemist, and the rigors of peer review impressed upon the hard (fundamental) sciences are markedly different from those we “claim” adherence to in medicine. I find that some of the medical literature and study designs fall

short of what would pass muster in the fundamental science industry. That is a shame! Such statements, as discussed here, have to be served for public consumption, and even to our colleagues, with a generous helping of skepticism and qualification.

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