Importance of Pattern of Alcohol Consumption

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Over the last several decades, prospective epidemiological studies have consistently shown that moderate alcohol consumers have a lower risk than abstainers of an initial myocardial infarction (MI)\(^1,2\) or of recurrent cardiovascular disease.\(^3,4\) Moderate alcohol intake has similarly been inversely associated with total mortality.\(^5,6\) For developed nations, epidemiological studies estimate that a population with more moderate drinkers and fewer abstainers will have lower rates of cardiovascular disease and total mortality.\(^5,6,8\) In fact, guidelines for sensible drinking developed in the United Kingdom suggest that “middle aged or elderly men and post-menopausal women who drink infrequently or not at all may wish to consider the possibility that light drinking might benefit their health.”\(^9\) Still, the absence of a clinical trial for the effects of alcohol on cardiovascular disease and mortality forces us to use observational data and studies of the effects of alcohol on risk factors to make recommendations encouraging alcohol use, a condition some physicians remain reluctant to accept. In addition, the adverse health and societal effects of heavy or inappropriate drinking are well known to all.

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Most studies on alcohol and health have focused on the quantity of alcohol consumed. Few have attempted to assess the pattern of alcohol drinking in relation to cardiovascular disease. In this issue of Circulation, Mukamal and colleagues\(^10\) report that binge drinking (defined by them as the consumption of 3 or more drinks within 1 to 2 hours) completely negated the inverse association of alcohol intake with total mortality among post-MI subjects. For these binge drinkers, the risk of death was even higher than for abstainers. Furthermore, binge drinking was not rare, being reported by 25% of drinkers in their study.

Two related components of drinking pattern are binge drinking and frequency of drinking. Recent research indicates that more frequent drinking, especially consumption several days per week or even daily, is associated with more favorable outcomes than only occasional or weekly drinking.\(^11,12\) Frequent consumption may also help explain the low rates of coronary disease despite high levels of typical risk factors among the French, the so-called “French paradox.” The accumulated data suggest that the low rates of coronary disease among the French relate not so much to the amount of alcohol they consume but to their traditional pattern of having wine with their meals every day.

A large number of mechanisms have been described by which the moderate intake of alcohol, as well as of the polyphenols in wine, may reduce cardiovascular risk; these include an increase in high-density lipoprotein cholesterol,\(^13,14\) a decrease in platelet aggregation and coagulation effects and increased fibrinolysis,\(^15,16\) and beneficial effects on endothelial function.\(^17,18\) However, there are a number of possible ways by which a high rate of alcohol consumption might increase the risk of reinfarction or sudden death after an acute MI. Mukamal et al\(^10\) discuss vasoconstriction, an increase in clotting activity, and induction of ventricular arrhythmias as possible mechanisms.

Where does this leave the physician in regard to giving advice to patients? Do current data on alcohol support the inclusion of moderate drinking as part of a healthy lifestyle? In the large cohort studies by Stampfer et al\(^19\) and Hu et al,\(^20\) participants who met all 5 components of a “healthy lifestyle” had dramatically lower risks of coronary disease and diabetes; in addition to not smoking, avoiding obesity, eating a reasonable diet, and getting exercise, the fifth component (that independently made substantial contributions to health) was “consuming 1/2 to 2 alcoholic drinks per day.”

The study by Mukamal et al\(^10\) supports a reduction in total mortality after a MI for moderate drinkers, but only if they do not binge drink, which illustrates the importance of advising patients to avoid high rates of alcohol intake. Furthermore, their study found that only 3% of their binge drinkers had a history of “alcohol abuse” documented in their medical records. This indicates that current drinkers, even those without a history of alcohol abuse, need to be counseled to modify their drinking practices if they include binging. Finally, many patients in the wake of a MI begin to appreciate life in a new way, to slow down and enjoy the pleasures around them. Savoring a glass of wine with a meal or a beer or cocktail before dinner may not only enhance the lives of these patients but may also prolong them.

Disclosure

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References


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