Your Cardiovascular Destiny

Picking your parents has never been more important. A report in the January 26, 2012 New England Journal of Medicine, that most august of clinical journals respected worldwide, revealed the results of a meta-analysis (detailed methodical evaluation of multiple large studies to tease out meaningful data possibly lost by not having enough patients in any given study) of 18 well-done and respected cardiovascular population trials. They analyzed over 250,000 patients looking at the major classic risk factors for heart disease: high blood pressure, elevated cholesterol, diabetes, smoking status, as well as age, sex and ethnicity (limited to white or black given the populations reported). Patient populations were analyzed at ages of 45, 55, 65, and 75 years.

The conclusion was that the blood pressure, cholesterol, diabetic and smoking status set your “cardiovascular destiny”, or lifetime risk, regardless of your age, gender and ethnicity. Moreover, much of this risk was determined by middle age. If you have made it into your forties without active risk factors, your chance of having a cardiovascular event is extraordinarily remote. The optimal cardiac risk factor goals, for example, for an individual at 55 years of age, were a total cholesterol level of <180 mg/dL, blood pressure <120 systolic and 80 diastolic millimeters of mercury, being a nonsmoker and a nondiabetic. Which risk factor one had did not seem to impact the outcome as much as the total number of risk factors present.

On the other hand, if you have hit the cardiac jackpot with multiple active cardiac risk factors, your risk of a cardiovascular event (death, heart attack, stroke) is pretty much set, and is worse with increasing numbers of the risk factors listed previously. In an elegant analytic model looking at competing risks in each group, they also determined that despite increased risk factor burdens in blacks, gender and ethnicity do not alter the outcome. Naturally, the impact of age increased risks across all groups.

The message is that prevention strategies to manage the identified risk factors remain the cornerstone of health maintenance, and the sooner one implements these interventions, the better. Preventive cardiology is focused on optimal and efficient assessment and treatment of these potent cardiac risk factors. It remains the goal of clinical researchers and clinical practitioners to develop and use better technologies and medications.

But there is a bigger picture to keep in perspective. Global health strategies in public policy also need to keep these new data in mind. Educating our children about healthy eating habits, exercise and weight control, and avoidance of tobacco products will help stem the future otherwise inevitability of cardiovascular disease. Reducing the prevalence of risk factors may have more of an impact than treating risk factors that have developed, and would certainly reduce the cost of future care. Of course, this is America…you have the individual right to do what you want with your health decisions. My invasive cardiology colleagues, heart surgeons and the for-profit hospitals appreciate the business.

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