HEART OF THE MATTER

Lipid Target Practice

BY SIDNEY GOLDSTEIN, M.D.

Ever since Dr. Joseph L. Goldstein and Dr. Michael S. Brown established the foundation of the cholesterol hypothesis, the medical community has taken aim at lowering serum cholesterol in men and women throughout the world. The initial attempts to lower cholesterol with diet, exercise, and occasionally surgery met with only marginal success.

Not until the introduction of statin therapy to our therapeutic armamentarium did we achieve measurable success in both lowering cholesterol and an associated decrease in atherosclerotic cardiovascular disease mortality and morbidity.

Our success in lowering cholesterol has been measured by a number of international epidemiology studies, the first of which was performed in 1996-1997, the Lipid Treatment Assessment Project (L-TAP) (Arch. Intern. Med. 2000;160:459-67).

The most recent study, L-TAP 2, was an international survey carried out in more than 10,000 patients in nine countries between 2006 and 2007 (Circulation 2009;120:28-34) and catalogues the profound decrease in cholesterol lowering that has been achieved during the last 10 years.

The result of L-TAP 2 points out the significant success that has been achieved during that period in lowering serum LDL cholesterol and raising HDL cholesterol. Successful cholesterol-lowering to the country-specific levels was achieved in 73% of all patients and 67% of high-risk patients. Most of the success was achieved in patients with low to moderate risk.

Comparable data in the earlier L-TAP study reported successful lowering in only 38% and 18% respectively. Dr. Antonio Gotto, in an accompanying editorial, suggests this success was likely due to "the introduction of more effective lipid-lowering therapies" rather than improved patient compliance or physician awareness.

Unfortunately, the very-high-risk patients, those with coronary artery disease and at least two major risk factors, remain a serious problem. Successful lowering of serum cholesterol to the target of below 70 mg/dL was reached in only 30% of the very-high-risk patients. Because of the delayed introduction of the higher potency drugs atorvastatin and rosuvastatin, their use was limited to approximately one-half of the patients in L-TAP 2.

It is possible that the more widespread introduction of these drugs or even more potent drugs in the future will result in further cholesterol lowering in the very-high-risk patients who are still undertreated yet have reached therapeutic goal. The strong association of hypertension, obesity, and diabetes in the high-risk group emphasizes the importance of a multidimensional therapeutic approach to the high-risk population.

The minimal target for cholesterol treatment is yet to be determined, but the Treating to New Targets (TNT) study comparing high- and low-dose atorvastatin, indicated that treatment to an LDL cholesterol level of 77 mg/dL, compared with 101 mg/dL, was associated with a 22% in the reduction of the risk of a first major cardiovascular event (J. Am. Coll. Cardiol. 2006;48:1793-9).

The authors noted that their study was limited by the uncertainty about the nature of the patients and participating physicians. This uncertainty provides an important message in light of our current health care debate. It can be presumed that patients in L-TAP 2 are unique and hardly representative of this country's population as whole. This is important to keep in mind as we search for better prevention of cardiovascular disease in America. It is fair to assume that the nearly 50 million Americans without health insurance would not have been among the patients included in L-TAP 2 and are probably outside of the cholesterol prevention programs. Their cholesterol levels do not appear on the radar screen.

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A recent study suggests that adherence to current cholesterol guidelines could prevent 20,000 myocardial infarctions and 10,000 deaths annually (Ann. Intern. Med. 2009;150:243-54).

Our ability to provide quality cardiovascular care is seriously limited by the economic barriers to access to care both acute and preventative. To successfully deal with our national epidemic of cardiovascular disease we need to mitigate those economic barriers and improve the accessibility to health care to all Americans. ■

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Correction

The My Take article, "Mitral Clip Has Treatment Role Despite Its Limitations," featuring commentary by Dr. J. Scott Millikan, a cardiothoracic surgeon in Billings, Mont., included an incorrect photo (April 2010, p. 8).

Cardiology News

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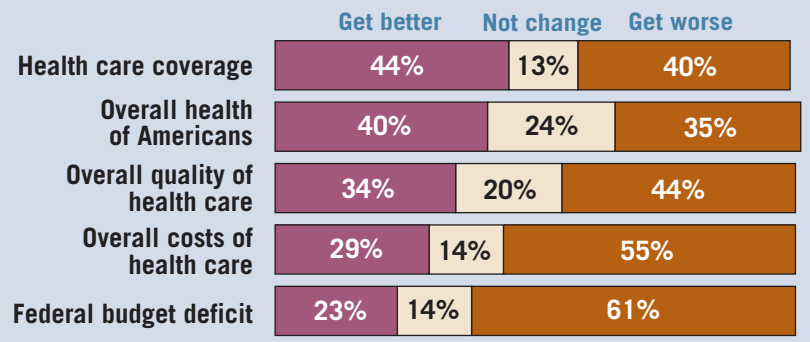
VITAL SIGNS

Concerns Remain After Health Care Reform Passage

Will each of the following get better, not change, or get worse than if no health care bill passed?



Notes: Based on a USA Today/Gallup poll of 1,033 adults conducted March 26-28. Don't know/refused responses not shown.

Source: Gallup Inc.