Niacin After Coronary Bypass Grafting and for Coronary Disease Prevention

The editorial by Waters and Azar1 that appeared in the July 11, 2000, issue of Circulation summarized reasons for more aggressive cholesterol-lowering therapy both after coronary bypass grafting and for the primary and secondary prevention of coronary disease. In the same issue, Lemieux et al2 suggested triglyceride determinations and waist measurements for the atherogenic metabolic triad in men. In the preceding issue, Haflerner3 suggested the possibility of using fibrates “to attempt to reduce triglyceride levels and to raise levels of high-density lipoprotein (HDL) cholesterol.”

Only one of these articles1 mentioned niacin, the only drug that reduces LDL cholesterol, increases HDL cholesterol, lowers triglycerides, reduces lipoprotein(a), increases the HDL/LDL ratio, and changes small, dense LDL to large-particle LDL.4,5 Furthermore, niacin achieves these benefits without diet and at low cost—$9 to $12 a month for usual doses. Although available without prescription, niacin is not a do-it-yourself drug. Use of niacin requires knowledgeable medical supervision.5

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Response

Dr Parsons’ comment raises the interesting issue of whether we should be treating our patients to optimize their blood lipid profiles or to reduce their risk for future coronary events. These 2 goals may not always be congruous. Niacin favorably modifies all of the lipoprotein end points, as Dr Parsons points out, but it did not reduce the primary end point in the only controlled clinical trial in which it was tested.1 Statins do not increase HDL cholesterol as much as niacin can and have no beneficial effect on lipoprotein(a) [Lp(a)]. In each of the 5 major trials in which they have been tested, however, statins reduced major coronary events, with relative risk reductions from 24% to 37%.

This dilemma is not only about niacin. In postmenopausal women with coronary disease, hormone replacement therapy reduces LDL cholesterol, reduces Lp(a), and raises HDL cholesterol, but it does not reduce events.2 Gemfibrozil significantly reduced cardiovascular events in one trial involving men with coronary disease, low HDL cholesterol, and no elevation of LDL cholesterol;3 however, meta-analysis of older fibrate trials has raised the suspicion that drugs from this class may increase noncardiovascular mortality.4 It may turn out that the safest and most effective way to reduce cardiovascular events in patients with low HDL cholesterol, high Lp(a), or even diabetes is not to treat the biochemical abnormality but rather to lower LDL cholesterol.

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