Management of concomitant coronary and carotid artery obstructive disease

Harold C. Urschel, Jr., M.D.
Dallas, Texas

The high morbidity and mortality from myocardial infarction associated with carotid endarterectomy and neurologic complications secondary to carotid artery disease following coronary artery grafting can be significantly reduced by simultaneous or staged revascularization of the carotid and coronary arteries.

The choice of combined or sequential surgical procedures is determined by the severity of the disease, both clinically and anatomically, in each system. Every patient should be carefully assessed and placed in one of three therapeutic categories.

I. Simultaneous carotid endarterectomy and coronary artery revascularization:
   A. High risk cerebral vascular disease:
      1. Over 70% occlusive lesion of one or both internal carotid arteries, and
      2. Transient ischemic attack.
   B. High risk coronary artery disease:
      1. Severe stenosis of the left main coronary artery (>70%), or
      2. Unstable or severe angina pectoris, or
      3. Severe triple-vessel disease.

(If both carotid arteries are diseased, the

more severely affected artery should be operated on initially with the simultaneous approach and the opposite side endarterectomized at an interval of 1 to 6 weeks.)

II. Initial carotid endarterectomy with staged coronary artery revascularization:
   A. Significant carotid artery disease as defined in I-A.
   B. Stable angina pectoris.

III. Initial coronary artery revascularization with staged coronary endarterectomy:
   A. Asymptomatic carotid lesions with less severe carotid artery stenoses.
   B. High risk coronary artery disease.
      As defined in I-B.

With this approach in 82 patients there has been no mortality and minimal morbidity.