

Carotid Endarterectomy

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In the United States more than 750,000 individuals have a stroke each year. To put this into perspective, there are more new strokes than cancers of the breast, prostate and colon combined.

Although there are multiple causes of stroke, disease of the carotid artery, the major blood supply to the brain, is responsible for 40 percent of all strokes. Atherosclerotic plaque in the carotid artery can shed clot or plaque particles that travel through the carotid until they obstruct smaller blood vessels in the brain. This in turn causes injury to the brain cells, or stroke.

Carotid disease is suspected in anyone who has stroke-like symptoms. More frequently it is being diagnosed in individuals without symptoms. An alert physician will often ask for a routine screening test in someone who has a “bruit” or swishing sound in the neck, or evidence of other vascular disease such as coronary artery disease. The ultrasound is a quick non-invasive test that is quite accurate in detecting plaque in the carotid artery.

The indications for surgery have been well established through clinical trials. In general, patients with carotid plaque and associated neurological symptoms are referred for surgery as the evidence shows the risk of stroke to be dramatically reduced once the plaque is removed. For patients without symptoms, generally only those with severe narrowing are at risk for stroke. Although the comparative outcomes for those treated medically versus those who undergo surgery is less striking for the asymptomatic patients, surgery reduces the risk of stroke by half in these individuals as well. In either case, the risk of surgery must be balanced against the risk of medical therapy alone.

Carotid endarterectomy has been performed for over 50 years and is the most common procedure for treating patients with carotid artery disease. In experienced hands, the risk of a major complication which includes stroke is less than 2 percent. More recently balloon angioplasty of the carotid artery and stent placement has been used to treat this disease. Although early reports showed higher complication rates, clinical trials are currently underway to determine if angioplasty and stenting is as safe and as durable as carotid endarterectomy.

Surgeons differ on techniques for performing carotid surgery. Some prefer to do the operation under local

anesthesia, others general anesthesia. Most surgeons close the artery with a patch of material, but not all. There is no clear consensus on whether one technique is better than another. Good surgeons will develop a set of techniques that yield the best results and are most suitable for their patients. The measure of success for this operation is a low risk of major complications, i.e., stroke and death.

If surgery has been recommended, a patient should always feel comfortable asking his or her surgeon about the indications for surgery, alternative treatments and outcomes, the surgeon's complication rate, the recovery and long-term results. If your surgeon is uncomfortable discussing these issues, it might be wise to get another opinion.

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