No Nonagenarians Please!

I read with interest the article by Durward et al on the technically successful carotid endarterectomy procedures that they performed on the elderly. No doubt the group has considerable experience given the fact that they have operated on many patients, several of whom were over the age of 89. Based on their still limited experience in this specific subgroup, the authors claim that an operation should be considered for symptomatic patients in good clinical condition. It appears that this conclusion may need some tempering. In the accompanying critique, Mayer states that many surgeons may remain reluctant because of the high likelihood of comorbid conditions being present and also notes that one can only do so much with scarce health care resources. A simple cost-effectiveness analysis will show that because of the quite limited life expectancy, very little health may be gained in this subcategory of patients, whereas expenditures will be considerable. It is given that some strokes may be prevented, but what is actually gained by the operation? Any medical doctor should realize that this type of research is already unethical to begin with. It is a waste of valuable resources and patients are exposed to considerable risk and stand to gain nothing. This may be a rare example of the opposite of the frequently heard argument that a randomized clinical trial is unethical because too many subjects might be subjected to a supposedly inferior old treatment. I ask that readers please forget about this article and not waste future resources on the research question posed, or expose patients to unacceptable risk.

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In reply

We thank Dr Buskens for his comments. The question of whom not to offer a surgical procedure or lifesaving medical treatment is certainly a crucial debate. The debaters include physicians, those in legal professions, ethicists, economists, actuaries, politicians, and special interest groups among others.

From a strictly medical perspective, we agree there are patient subsets for whom carotid endarterectomy (CEA) is not likely to have a meaningful positive effect on quality or duration of life. Patients of any age with significant comorbidities (smoking, coronary artery disease, severe diabetes, cancer) have shown decreased longevity at 5 years by about 50%. As LaMuraglia et al recently argued, “The problem is to be able to conclusively identify which risk factors or comorbidities are of major significance in these carotid patients and how long they may survive.” Both logic and actuary tables would argue that it is far more reasonable to offer CEA to an otherwise well elderly patient than to a 40-year-old patient with terminal cancer. In our opinion, age is 1 more variable to be considered and is decidedly not an exclusion factor in isolation.

Turning to an economic whole societal cost perspective, we argue that CEA as opposed to nonintervention (other than standard medical care) is cost-effective. According to US Social Security data,2 life expectancy at achieved age of 80 years is 6.98 additional years for males and 9.11 years for females. For achieved age of 89 years, the figures are 4.09 additional years for males and 5.05 for females. The average cost of CEA is dependent on many variables including use of angiography, magnetic resonance imaging, magnetic resonance angiography, duplex ultrasonography, intraoperative monitoring, etc. In our medical center, carotid duplex is often the sole presurgical evaluation, the length of stay is 2 days, and perioperative stroke incidence is very low (<2%). Total reimbursement to the hospital and surgeon averages $6500. In the patient denied CEA who goes on to have a stroke treated with tissue plasminogen activator, the treatment cost would be at least $7375.1 If a patient were denied CEA and suffered a subsequent disabling stroke requiring a prolonged hospital stay, skilled care, rehabilitation and nursing, and home placement, the cost would be many times that of a CEA.

Finally as advocates for our patients, we need to stress that what is actually “gained” for our elderly patients who have undergone CEA is precious and monetarily unquantifiable—the avoidance of a disabling but nonfatal stroke adds quality-adjusted life-years of independence.

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