Coronary Artery Disease in the Elderly

In 1990 all clinical cardiologists are faced with the problem of what to do with those elderly patients whose symptoms are related to coronary disease. At present, there are no published clinical trials that provide guidelines for the practicing physician. In fact, in the past, all clinical trials have specifically excluded the elderly from both surgical and medical treatment trials. However, there are several reports of observational data in the older patient with ischemic heart disease.

I'd like to share with the reader my own thoughts about what the literature is telling us in this patient population. Since I am a clinical cardiologist my opinions about coronary artery disease in the elderly are based largely on my experiences with the individual "elderly" patient. The first question that always arises is "what is elderly?" Obviously there are the young-elderly, the old-elderly, the feeble-elderly, the elderly with multi-system disease and the elderly with one-system disease, i.e., heart disease. These subgroups probably have different prognoses when subjected to interventional or drug therapy.

In this editorial I’d like to focus on coronary artery bypass surgery in the elderly since this issue of Clinical Cardiology contains an article on that subject. Bashour and colleagues report on the patient over the age of 80. I am impressed with an operative mortality of 12.5% for the overall group of 80 consecutive patients over the age of 80 who, in some instances, required valve replacement as well as coronary bypass surgery.

I suppose one could argue that anyone over the age of 80 should not be subjected to coronary artery bypass graft surgery. It’s my experience that an 80-year-old pre-operatively becomes a 90-year-old in the cardiac intensive unit immediately postoperatively. However, one can also argue that all 80-year-olds are not the same. There are many individuals who want to continue an active lifestyle (Bob Hope and George Burns are two typical examples), yet who may be hampered by ischemic cardiac symptoms. Thus, the decision to offer coronary bypass surgery to the patient over 80 is an individual one and cannot be determined by group data. However, group data do provide some information on the operative risk in elderly patients.

The long-term benefits of surgery are unknown, but some data suggest that patients in this age group do live longer when they survive successful surgery. Knapp et al. reported on the lifestyle of elderly patients who survive coronary bypass surgery. They indicated that 10% of patients could care for themselves, 8% were capable of mild exertion, and 82% were capable of moderate exertion. Thus they categorized these patients as "doing well."

Our own experience is similar to that reported in the literature in that the elderly patient has a higher operative mortality, higher operative morbidity, and a longer hospital stay than the younger patient—thus it is more expensive to perform surgery in elderly patients. The study by Bashour and colleagues confirms this observation, since the mean hospital stay for the 80-year-olds was 28 days compared with 11 days for all patients undergoing cardiac operations at the two institutions reporting these data.

Parsonett and colleagues developed a useful pre-operative risk classification based on the patient’s age. I find this helpful when talking to the patient and the patient’s family regarding the potential risks for heart surgery in the elderly patient. Parsonett et al. assigned a risk score to patients as follows: those age 70-74 had a risk score of 7, which was predictive
of an operative mortality of about 5%; those age 75–79 had a risk score of 12, predicting an operative mortality of about 9%; and patients over 80 years had a risk score of 20, which predicted an operative mortality of 31%. These predictions are based on Parsonett’s review of the literature. The operative mortality in the patients reported by Bashour et al. are well below this predicted mortality.

Clinicians reading the current literature on heart surgery in the elderly have to arrive at the following conclusions: (1) operative mortality is increased; (2) operative morbidity is increased; (3) hospitalization is increased and, as a result, cost of surgery is increased.

There are several questions that need to be asked when considering surgery in the elderly patient:

(1) Is the cost worth the benefit?
(2) Do elderly patients enjoy their remaining years?
(3) Is there objective evidence of increased survival?
(4) Is there objective evidence of increased activity compared to pre-operative status?

The answers to these questions are not obvious at this point in time but I hope they will be available to us as outcome data are developed in this country.

C.R. Conti, M.D.
Editor-in-Chief

References

1. Bashour TT, Hanna ES, Myler RK, Mason DT, Ryan C, Feeny J, Iskikian J, Wald SH, Antonini C, Malabed LL: Cardiac surgery in patients over the age of 80 years. Clin Cardiol 13, 237 (1990)
2. Knapp WS, Douglas JS, Craver JM, Jones EL, King SB III, Bone DK, Bradford JM, Hatcher CR: Efficacy of coronary artery bypass grafting in elderly patients with coronary artery disease. Am J Cardiol 47, 923 (1981)
3. Parsonett V, Dean D, Bernstein AD: A method of uniform stratification of risk for evaluating the results of surgery in acquired adult heart disease. Circulation 79 (suppl), 1-3 (1989)