

Cardiac Surgery in Octogenarians: Long-Term Survival, Functional Status, Living Arrangements, and Leisure Activities

Rakesh K. Chaturvedi, MD, PhD, Magdalena Blaise, MSc, CTRS, Josée Verdon, MD, Sameena Iqbal, MD, Patrick Ergina MPH, MD, Renzo Cecere, MD, Benoit deVarenes, MD, and Kevin Lachapelle, MD

Division of Cardiac Surgery, and Departments of Geriatrics and Nephrology, Royal Victoria Hospital, Montreal, Quebec, Canada

Background. A prospective study of survival, functional outcome, living arrangements, daily activities and leisure engagements among octogenarians up to 5 years after cardiac surgery was performed.

Methods. The study consisted of a cohort of 300 consecutive octogenarians with three interviews made at 6-month intervals for a total of 593 postoperative interviews. Functional outcomes were measured using the Barthel index and Karnofsky performance scores and divided into autonomous, semiautonomous, or dependent. Living arrangements and leisure activities within the social, physical, cognitive, and creative domains were recorded in an open-ended questionnaire.

Results. There were 150 men and 150 women with a mean age 82.6 years. The 30-day survival was 84.3%. Actuarial survival at 1, 3, and 5 years was 76.6%, 66.6%, and 57.8%, respectively. Among the survivors at the first interview, 2.2 years postoperatively, there were 63.9% autonomous, 31.7% semiautonomous, and 4.3% depen-

dent patients versus at the last interview, 3.6 years postoperatively, in which there were 64.9% autonomous, 28.1% semiautonomous, and 9.2% dependent. At the first interview, 76.4% were at home, 19.2% in a residence, and 4.3% in a supervised setting. At the third interview, 71.8% were at home, 21.2% in a residence, and 6.9% in a supervised setting. Nearly all patients were involved in leisure activities in the social (98.9%), cognitive (98.4%), and physical (93.1%) domains. At the end of the last interview, activities within the social and cognitive domains were maintained with a small decrease in the physical domain.

Conclusions. Surviving octogenarians remain at home, function independently, and engage in regular leisure activities years after cardiac surgery. This information might help physicians and surgeons regarding long-term outcome of open cardiac surgery in octogenarians.

(Ann Thorac Surg 2010;89:805-10)

© 2010 by The Society of Thoracic Surgeons

Octogenarians are the fastest growing segment of the North American population [1]. The proportion of cardiac surgery patients older than 80 years of age has risen to 7% to 10% [2, 3] with an associated mortality of 5% to 16% depending on the patient cohort [4-7]. Beyond 30-day mortality, less is known regarding long-term survival, and even less is known regarding patients' functional status, activities, and quality of life after such major surgery.

In an attempt to better measure the effects of open cardiac surgery in an octogenarian population, we evaluated patients for up to 5 years after cardiac surgery, noting their survival, functional outcome, living arrangements, and involvement in leisure activities.

Leisure occurs during discretionary time, is performed without obligation, and therefore is intrinsically motivated [8]. The pursuit of leisure activities, as well as the functional independence and the type of living arrangements of patients, has been found to be an important

indicator of quality of life among the elderly [9]. The notion of leisure is useful in weighing risks and benefits of cardiac surgery because the engagement in leisure pursuits after surgery reflects balance and normalcy in life and hence a successful surgical intervention [10].

The purpose of this study was to record long-term outcomes of traditional open cardiac surgery in terms of functionality, living arrangements, and involvement in leisure activities regardless of type of surgery.

Material and Methods

Three hundred consecutive patients aged 80 years or older who underwent cardiac surgery in a single tertiary-care, university hospital between September 2000 and May 2005 were selected for this prospective study. In general, patients undergoing surgery were previously functional until the recent diagnosis of cardiac disease, had a perceived reduction in their quality of life, were on maximal medical therapy, were not candidates for percutaneous coronary intervention (PCI), or could not be discharged from hospital because of life-threatening cardiac lesion, ie, severe left main disease or critical aortic

Accepted for publication Dec 1, 2009.

Address correspondence to Dr Lachapelle, Division of Cardiac Surgery, 687 Pine Ave W, Room 5 8.73, Royal Victoria Hospital, Montreal, Quebec, Canada H3A 1A3; e-mail: kevin.lachapelle@mhcc.mcgill.ca.