
Panel Summary

Geriatric anaesthesia

Participants

Douglas B. Craig MD FRCPC (Chairman)

*Department of Anesthesia, University of Manitoba,
Winnipeg, Manitoba*

Charles H. McLeskey MD

*Department of Anesthesiology, University of Texas
Medical Branch, Galveston, Texas*
(Anatomical and physiological changes of aging)

Paul A. Mitenko MD FRCPC

*Department of Internal Medicine, University of
Manitoba, Winnipeg, Manitoba*
(Changes in drug disposition)

Ian R. Thomson MD FRCPC

*Department of Anesthesia, University of Manitoba,
Winnipeg, Manitoba*
(Cardiac risk assessment and reduction in the elderly)

Kenneth M. Janis MD

*Departments of Anesthesiology, University of
California, Irvine and San Diego, California*
(Anaesthetic management of the geriatric patient)

Introduction

Increasing numbers of elderly patients are presenting for surgery, much of it major, requiring lengthy and complicated operative and postoperative courses. Advances in both surgery and anaesthesia are likely the primary basis for these increasing numbers, as opposed to the well-publicized "greying" of the North American population. Whatever the basis for the changes, anaesthetists are now being presented with increasing challenges in the anaesthetic management of geriatric patients. This panel reviewed the information base for a developing new subspecialty – geriatric anaesthesia.

Dr. McLeskey began with a review of the anatomical and physiological changes of aging, with a special emphasis on anaesthetic implications. He noted that an understanding of the anaesthetic implications of the physiologic changes of aging is essential as the basis for appropriate decisions concerning anaesthetic management of geriatric patients.

Based on presentations given at the Annual Meeting of the Canadian Anaesthetists' Society in Montreal, Quebec, June 25, 1986.

Dr. Mitenko reviewed the effects of aging on drug absorption, distribution, metabolism and excretion. He noted that while characteristic age-related patterns of change have been described, because chronologic age is a notoriously poor indicator of biologic age, and since drug response is the end result of a series of many interrelated steps, individualization of therapy is the key requirement.

Dr. Thomson reviewed a number of approaches to cardiac risk assessment, ranging from the medical history to invasive procedures. The as yet incomplete and inconclusive literature on risk reduction was examined.

Dr. Janis used the experience of a large geriatric centre in southern California to discuss the anaesthetic management of the geriatric patient. Proper patient selection and preparation, along with a high incidence of local or regional anaesthesia, and an emphasis on outpatient procedures, has been associated with a high degree of success.

Anatomical and physiological changes of aging

In 1980, 23,000,000 Americans were 60 years of age or older and it is predicted that this age group will expand by the year 2050 to include 55,000,000 Americans. For the purpose of this discussion, we will arbitrarily consider individuals 65 years of age or older to be in the geriatric group. An understanding of the anaesthetic implications of the physiologic changes of aging is essential as the basis for appropriate decisions concerning the choice of and methods for administering anaesthesia to geriatric patients.

Decreased basal metabolic rate

Basal metabolic rate declines approximately one per cent per year beyond age 30 (Figure). Therefore, anaesthetic