

ESSENTIALS OF **GERIATRIC NEUROANESTHESIA**



EDITED BY
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Essentials of Geriatric Neuroanesthesia



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Essentials of Geriatric Neuroanesthesia

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Karam Chand and Indrawati Prabhakar
Vidhya Sagar and Saraswati Agnihotri

Hemanshu Prabhakar

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Jia Lal and Sushila Devi

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Foreword

Is there a need for a textbook on geriatric neuroanesthesia? A similar question was asked four decades ago about the need for a textbook on neuroanesthesia. Now in 2019, there are a substantial number of textbooks on this subject. With complex neurosurgery being undertaken in elderly patients these days, there is a definite need for a comprehensive textbook on geriatric neuroanesthesia.

Life expectancy is increasing all over the world. The global average of life expectancy, which was 48 years in 1950, increased to 70 years in 2012. In India, life expectancy as of 2015 is 68.3 years on the whole—69.9 years for females and 66.9 years for males. In Japan, the figure is 83.7 years for the whole population—86.8 years for females and 80.5 years for males. With increasing life expectancy, more and more elderly patients are likely to present for surgery and anesthesia.

There is a general increase in risk of surgery with increasing age. This has been shown in hip and knee arthroplasty. Despite the increased rate of adverse events, there are gains in terms of pain relief and ability to perform activities of daily living, and overall most elderly groups were satisfied with their surgeries. Thus there are advantages of surgery, though at a higher risk. A similar argument can be held with regard to neurosurgery. Minimizing this risk and offering the advantage of surgery is a big challenge. In a review of octogenarians undergoing neurosurgery, only a small proportion of the emergency admissions were discharged directly to home. Octogenarian patients had higher complication rates and 30-day

mortality than those less than 80 years old, demonstrating the additional risk and the need for enhanced perioperative care. Cardiovascular, pulmonary, and metabolic risks increase with age. Added to this, the polypharmacy, drug interactions, and altered response to drugs due to organ dysfunction complicate the management of the elderly patient. Cognitive function might be altered in some elderly patients, and the response of the patient's cognitive function to anesthetics is a matter of great debate.

To address the above issues, Prabhakar et al. have undertaken a massive effort of compiling a textbook of geriatric neuroanesthesia. They have divided the topics to suit the practical requirements of the clinicians. In the initial chapters the age-related changes in neuroanatomy, neurophysiology, and neuropharmacology as relevant to neuroanesthetic practice are discussed, followed by discussion of the individual lesions and various general aspects of management of the elderly, such as fluid and electrolyte balance, pain management, and palliative care. Overall, this book is a practical compendium which will be very helpful to practitioners of geriatric neuroanesthesia.

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