Quaternary Prevention in Geriatric Anesthesiology

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Abstract

Anesthesia administration in geriatric patients has always been challenging. Besides, the variable pharmacokinetics and pharmacodynamics, numerous other factors need to be considered for any surgical procedure or during treatment of critically ill geriatric patients in intensive care units. Besides taking care of clinical co-morbidities, many other preventive measures are necessary to minimize the morbidity and mortality in this subset of population. The concept of ‘quaternary prevention’ has recently gained popularity but its application in geriatric population presenting for surgery has been very limited. The current brief review discusses various aspects of quaternary prevention applicable to anesthesia procedures in geriatric patients during peri-operative period.

Keywords: Anesthesia; Geriatric; Quaternary prevention

Introduction

Geriatric anesthesiology has developed as a distinct subspecialty of anesthesiology. This has been made possible by advances not only in the practice of anesthesiology, but of geriatric medicine as well. Our understanding of the subtle differences between young adult and elderly persons has increased significantly in recent years. Geriatric persons have distinct anatomical, physiological, and biochemical characteristics which impact their response to both pathological processed and pharmacological interventions. This fact holds true in anesthesiology, and forms the basis of the emerging subspecialty of geriatric anesthesiology.

Preventive anesthesiology in geriatrics

Along with anatomical, physiological, and pharmacological considerations, the preventive aspect of anesthesiology must also be kept in mind while dealing with geriatric subjects. This is the concept of quaternary prevention, a term coined by Jamoulle, who defined it as “action taken to protect him from new medical invasion, and to kept in mind while dealing with geriatric subjects.

Table 1: This mini review tries to address this lacuna.
quaternary prevention, such situations should be tackled by a multidisciplinary approach so as to keep the resource limitations and skills of attending anaesthesiologists in consideration.

Third domain of quaternary prevention aims to minimize the disease promotion process especially in critical care units where incidence of cross infection is high. Few geriatric patients may have lower immunity and immune status is further compromised if they do have any associated co-morbidity [7].

The leadership qualities of anaesthesiologists/intensivist can be tested to the core while adopting a balancing patient centered care and economic and evidence based approach [8,9].

Caring for geriatric patients takes a special effort from the attending clinician and support staff as these patients differ widely in terms of social, behavioral, and psychological aspects besides having clinical co-morbidities. 'First do no harm' as dictated by Hippocratic Oath holds very true for such subset of patients. All domains of quaternary prevention if appropriately followed will definitely reduce the morbidity and mortality in geriatric patients. The concept though not popular at present, will go a long way in further advancements of geriatric medicine [10]. The responsibility lies on us how to make comprehensive advancements in this field where a close-knit approach is required from social, behavioral, psychological, cultural, attitudinal, and financial aspects besides clinical judgment.

References