

Anesthesia Research Academics in Geriatric Patients: Need for a Clinical Caution?

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Editorial

Anesthesia has always been challenging in geriatric patients. The predominant reason being variable pathophysiological changes of aging confer a different degree of response to various anesthetic agents in geriatric population [1]. A basic rule is that geriatric patients are not old adults like the fact that children are not young adults.

Advancements in geriatric anesthesia have mainly been possible because of extensive research. Still, the scope is so wide that one must look for definite evidence with advancing medicine. All studies published in the indexed journals are taken as standard and are invariably imitated widely throughout the globe. They form a research platform for the budding physicians and many such studies become the thesis or project work for the post-graduate students. In fact, it is essential that such studies should include the description of the methodology and characteristics of the study in entirety. Any omission of important information or the data especially related to the demographic and clinical profile of the patient population can have adverse consequences if such studies are followed as such without proper validation and elaboration.

An elderly patient may have any form of co-morbidity which can have widespread ramifications during administration of regional or general anesthesia or for that matter any kind of anesthetic drug [2-4]. A patient with uncontrolled and severe diabetes, heart disease and uncontrolled hypertension, intestinal disorders that have been present for long to cause functional and physiological disturbances, pulmonary tuberculosis and other respiratory diseases which could have incapacitated the functional residual and vital capacity, a prolonged illness resulting in gross muscular weakness, deranged thyroid and other endocrinal disorders as well as many other systemic disorders can cause severe clinic-pathological disturbances which can significantly impact any anesthetic technique [2-4].

It is agreed that it is not possible to state an absolute measure of severity, as this is a matter of clinical judgment. But it is also mandatory that such high-risk patients should be optimized before surgical procedures. In fact, urgency of surgery also deserves special mentioning when ASA-III patients are being taken up for surgical procedures without optimization of their pre-op morbidity status. Orthopedic injuries do make the patients bed-ridden and diminish the quality of life but such elective surgeries require adequate optimization of their physiological status before surgical correction. We are practicing in the age of evidence based anesthesia and as such cannot afford to put a step wrong whenever we are undertaking high risk patients for surgeries. It is understandable that such patients can be taken up for emergency surgeries with appropriate high risk consent and optimization of physiological status as much as feasible. But taking up ASA III patients for elective procedures and that too for research

project requires self-introspection besides taking ethical and pharmacovigilance clearance.

The physiological differences between a 65-year-old and an 85-year-old are much more than expected chronologically as the organ function declines steeply with each decade. Another matter of concern is that a local anesthetic solution should be administered to such patients based on the body mass index (BMI) or the height of the patient should be taken into consideration. Higher doses can have variable and exaggerated effect in the geriatric population. Ideally, local anesthetic doses should be adjusted and individualized on the basis of height as these are 'high risk patients'. Also, pre-loading should be administered cautiously in patients with cardiac disease or those with impending or high risk for cardiac failure [5].

Research academics sometimes do not lay emphasis on basic social, economic, cultural and behavioral aspects while training the postgraduate students. Pulmonary artery catheterization, arterial cannulation, central venous cannulation, and many more invasive procedures are carried out in already compromised geriatric patients as a part of research work. Where simple I.V. line is sufficient, putting such invasive catheters is disregard to the basic human rights of the patient. Risks also get increased with performance of such invasive procedures. The choice of anesthesia especially neuraxial anesthesia in these patients is sometimes difficult due to alteration in the curvature of spine due to aging, calcification of ligaments, fused bony spine and difficulty in positioning for neuraxial anesthesia. Multiple attempts to secure neuraxial access is highly unethical when GA can be safely administered as it only highlights futile exercise to maintain 'regional glory'. Multiple venous punctures and sampling for various investigations which may not help in crucial therapeutic and diagnostic decision making also contribute towards disobeying principles of logical empiricism [6].

Keeping the patients fasting for a long time, assessment of various parameters in post-operative period by waking up the patient and keeping these patients for a long time in hospital to accomplish research work is also not appropriate. Not adopting a sympathetic, empathetic, and caring approach towards such patients is also a part of unethical clinical practice.

The research projects therefore should be cautiously undertaken in such populations as any error or therapeutic misadventure can result in higher morbidity and mortality.

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