Editorial

Good Preanesthetic Evaluation Is a Prelude to Good Surgical Outcome—But Where Are the Guidelines?

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Preanesthetic evaluation (PAE) is a process of clinical assessment and laboratory testing that precedes the administration of anesthesia for surgery. PAE is an important component of the anesthetic management of a patient. The perioperative period is associated with stress on the various domains of a patient's physiology, depending on the nature of the surgery. Pre-existing derangement of any organ function may be aggravated by the stress of surgery. PAE aims to assess the risk–benefit ratio of the surgery. PAE also provides an estimate of the extent of optimization of the patient's physiologic and metabolic status required before surgery so that the risk of morbidity and mortality of surgery is minimized. In elective surgery, the available time for this optimization may be sufficiently long, whereas, in emergency surgeries, the anesthesiologists may be constrained by the time available.

PAE generally comprises of an interview with the patient or guardian to review medical, anesthesia, and medication history, an appropriate physical examination, and a review of the other diagnostic data such as laboratory investigations, electrocardiograms, radiographs, and other consultations.

Anaesthesiology societies worldwide have been attempting to set the standards for PAE. Neurosurgical patients pose some unique challenges that need to be addressed in PAE. The Indian Society of Neuroanaesthesiology and Critical Care (ISNACC) appointed a working group to collect information on PAE practices of neurosurgery in India. The information collected is published in the current issue of *Journal of Neuroanesthesiology and Critical Care* (JNACC).[1]

In neurosurgical literature, several studies reported many preoperative predictive factors that influence the outcome of the patients. These factors have to be given due importance in the preoperative assessment of a neurosurgical patient. Some of the examples of such studies are as follows: In patients undergoing surgery for brain tumor resection and complex spine surgery, frailty assessed on a scale of 0 to 5 independently predicted discharge disposition, postoperative complications, and length of stay.[2,3] The Charlson Comorbidity Index is recommended as a preoperative risk assessment tool for patients undergoing surgery for spinal tumors.[4] A combination of advanced age ($\geq$ 60–65 years), elevated C-reactive protein level ($>$ 3 mg/L), and high Helsinki American Society of Anesthesiologists (ASA) score (Class 4) could identify one-fourth of the patients with postoperative complications.[5] In another systematic review of elective cranial neurosurgery, the value of the preoperative ASA physical status classification, the Karnofsky performance score (KPS), the Charlson comorbidity score, the modified Rankin Scale and the sex, KPS, ASA physical status classification, location, and edema score were found to predict early ($\leq$ 30-day) morbidity of intracranial tumor patients.[6] There are several such isolated studies that are not repeated by other groups and are not subjected to systematic analysis to be included in PAE protocols.

The role of preoperative laboratory testing in PAE remains controversial in general surgical patients undergoing noncardiac surgery. In otherwise healthy individuals, preoperative testing did not change clinical management and did not affect mortality or morbidity. Therefore, testing based on the patient's medical history seems to be justified. Whether similar conclusions can be drawn in neurosurgical patients has to be proven through high-quality studies.[7] Only such of those tests, proven to be beneficial, have to be included in preoperative preparation.

It is surprising to note that formal risk assessment is not a routine practice in the United Kingdom, according to a survey conducted by the Neuroanaesthesia Society of Great Britain and Ireland in neurosurgical patients.[8]

A stringent methodology is essential to evolve any guidelines. For example, the ASA task force on preanesthetic evaluation (for all types of surgical procedures) followed a six-step process.[9] To start with, a task force reached a consensus on the criteria for the evidence of the effectiveness of preanesthesia evaluation. Later, articles from peer-reviewed journals relevant to preanesthesia evaluation were evaluated. The evidence was classified into supportive, suggestive, and equivocal literature. Then, consultants with experience in preanesthesia evaluation who worked in academic and private practice participated in opinion surveys on the effectiveness of various preanesthesia evaluation strategies. They also reviewed and commented on a draft of the advisory developed by the task force. Later, additional opinions were solicited from active members of the ASA and from several open forums at three major national anesthesia meetings. Finally, all available information was used to build consensus within the task force to finalize the advisory. Such is the rigor that has gone into the formulation of guidelines for PAE in general surgical patients.

The ISNACC should be complimented for having taken up the initiative to start the process of developing guidelines for PAE of neurosurgical patients. As a first step, the working group has collected data on practices of PAE followed in different parts of the country. This information could form the basis on which future studies can be conducted to formulate robust and reliable guidelines not only for India but also for other countries.

Conflict of Interest
None declared.

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