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Anesthesia professionals not sufficiently aware of risks of postoperative cognitive side effects

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Postsurgical cognitive side effects can have major implications for the level of care, length of hospital stay, and the patient's perceived quality of care, especially in elderly and fragile patients. A nationwide survey of Swedish anesthesiologists and nurse anesthetists has found there is low awareness of the risks of cognitive side effects following surgery. Furthermore, only around half of the respondents used depth-of-anesthesia monitors. Results are published in *Annals of Medicine and Surgery*.

Patients generally expect to make a rapid recovery from anesthesia with a minimum of side effects. The main focus by anesthesia personnel centers around how to minimize cardiovascular and pulmonary risks and on the management of postoperative pain, nausea, and vomiting. According to the survey results, less attention is being paid to cognitive side effects following surgery, yet these complications can have major implications for the patient.

"We found that Swedish anesthesia personnel viewed risk assessment, prevention, and handling of postoperative delirium and postoperative cognitive dysfunction of rather low importance. Protocol and/or standardized routines were only rarely implemented," observes senior investigator Professor Jan G. Jakobsson, MD, PhD, of the Department of Anesthesia & Intensive Care, Institute for Physical Science, Karolinska Institute, Stockholm, Sweden.

Postoperative cognitive impairments may arise early on after surgery, such as the short-lasting, but still distressful postoperative emergence agitation (EA). Postoperative delirium (POD) usually makes its debut one or two days after surgery, sometimes giving rise to major concerns. The more subtle but longer lasting postoperative cognitive dysfunction (POCD) generally starts during the first week after surgery, but may last for a month. Although these side effects are of major concern for both hospitals and patients, they have received less attention from anesthesia personnel.

To gain insight regarding routines and practice for risk assessment, diagnosis, and management of postoperative cognitive side effects, and the use of EEG-based depth-of-anesthesia monitoring (DOA), investigators sent a web-based validated questionnaire to over 2,500 Swedish anesthesiologists and nurse anesthetists. The questionnaire consisted of three sections covering subjective preferences, routines, and practices related to the perioperative handling of EA, POD, POCD, and awareness. The response rate was 52%.

In general the respondents considered the risk for neurocognitive side effects to be the least important during the preoperative assessment, while the risk of awareness with recall (when patients are able to recall the surgery) as well as traditional cardiac and pulmonary risk was considered of high importance.

It has been suggested that the use of EEG-based DOA monitoring to fine-tune and tailor anesthetic delivery can reduce the risk of postoperative cognitive side effects. Previous surveys of anesthetic practice in Sweden showed a high degree of standardization and that structured protocols for the perioperative management are in place. However, the results of this survey were more diverse. EEG-based DOA monitors were used in half of all departments, but the frequency and indication for their use varied.

"Respondents were overall quite skeptical about the value of EEG-based DOA monitors, however their use in patients at risk for awareness was more positive among the nurse anesthetists than the anesthesiologists," notes Professor Jakobsson. "This attitude to DOA monitoring may be due to the rather negative stance of the Swedish Council on Health Technology Assessment regarding these devices. This is in contrast to the national guidelines in the UK, which support the use of DOA monitoring in at-risk patients."

"The results show there is a need to improve the knowledge of anesthesia personnel about risk factors, prevention and management of postoperative cognitive side effects," concludes Professor Jakobsson.

More information: "Postoperative management in order to minimise postoperative delirium and postoperative cognitive dysfunction: Results from a Swedish web-based survey," by Pether Jildenstål, CRNA, PhD; Narinder Rawal, MD, PhD, FRCA (Hon), EDRA; Jan Hallén, MD; Lars Berggren, MD, PhD; and Jan G. Jakobsson, MD, PhD. DOI: dx.doi.org/10.1016/j.amsu.2014.07.001, *Annals of Medicine and Surgery*, Volume 3, Issue 3.

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