ASA advisory on anesthesia awareness

Brain functioning monitoring is not routinely indicated, either to reduce anesthesia awareness episodes or to monitor anesthesia depth, the American Society of Anesthesiologists (ASA) says in a practice advisory approved at its annual meeting in October in Atlanta.

In the works for 2 years, the advisory addresses risks and strategies for preventing anesthesia awareness.

Among the recommendations, the advisory says physicians should rely on multiple means to monitor patients for anesthesia awareness. These include clinical techniques such as checking for movement, response to commands, and opened eyes, and using conventional monitors, such as electrocardiogram, blood pressure, heart rate, end-tidal anesthetic analyzer, and capnography. The decision to use a brain function monitor should be made on a case-by-case basis.

The advisory task force concluded that the need for general use of brain function monitors to prevent awareness has not been established. It found there was not enough evidence to justify a guideline or requirement to use brain function monitors to reduce awareness not only in high-risk patients but in other patients having general anesthesia.

The task force cautioned that maintaining low brain-function monitor values to prevent awareness may conflict with other anesthesia goals, such as preserving vital organ function and avoiding aggravating comorbidities.

The report analyzes 7 brain function monitoring devices and methods designed to measure the anesthetic effect on brain electrical activity. The devices convert brain activity to algorithms, which generate a number, or index. The index is typically scaled from 100 to zero, signifying awake, sedated, light anesthesia, and deep anesthesia.

Before and after surgery

The advisory says preoperative evaluation may be useful in identifying patients at increased risk for awareness. If possible, a preoperative evaluation should include:

- review of a patient’s medical records for previous occurrences of awareness or other risk factors
- an interview to assess patient anxiety or previous experiences with anesthesia
- a physical exam.

Patients found to be at substantial risk for intraoperative awareness should be informed of its possibility.

Because intraoperative awareness may be caused by equipment malfunction or misuse, the task force recommends using a checklist for anesthesia machines and equipment and verifying proper functioning of IV access and infusion pumps to ensure desired drugs and doses will be delivered.

The decision should be made on a case-by-case basis whether to give a benzodiazepine prophylactically to reduce the risk of awareness or to administer a benzodiazepine intraoperatively after a patient unexpectedly becomes conscious so the patient does not remember the event.

Postoperatively, practitioners should speak with patients who report recall of intraoperative events to obtain a detailed account of the experience and to discuss possible reasons. The awareness episode should be documented in an occurrence report, and the patient should be offered counseling or psychological support.

The advisory was developed by an ASA task force that reviewed more than 150
studies and sought comments from ASA members, technical experts, and manufacturers of brain function monitors.

In a related action, ASA recommended funding further research into the usefulness of brain function monitoring in minimizing the risk of intraoperative awareness.

**JCAHO’s controversial alert**

The current controversy over using brain function monitoring on all patients under general anesthesia arose last year when the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) issued a sentinel event alert on preventing anesthesia awareness.

The ASA said it did not agree with JCAHO’s timing of the alert because JCAHO was aware ASA was in the midst of its 2-year study in preparation for issuing this advisory.

The ASA practice advisory is at [www.asahq.org/news/AwareAdvisoryFinalOct05.pdf](http://www.asahq.org/news/AwareAdvisoryFinalOct05.pdf)