Obstructive Sleep Apnea Death and Near-Miss Registry Collecting Cases, but Society Says More Needed

SAN DIEGO—Members of the Society of Anesthesiology and Sleep Medicine (SASM) and the Anesthesia Closed Claims Project have established a registry to investigate unanticipated perioperative deaths and near misses in patients with obstructive sleep apnea (OSA). By assembling a series of detailed case reports for analysis, researchers hope to identify recurring patterns and themes associated with OSA-related adverse perioperative events, with the ultimate goal of risk prevention and improved anesthesia patient safety.

“There’s a wealth of information pointing to the fact that patients with OSA are at increased risk for adverse outcomes in the perioperative period,” said Norman Bolden, MD, associate professor of anesthesiology at Case Western Reserve University, in Cleveland. “What’s lacking in the medical literature, however, are details outlining the events that led to the deaths in patients with sleep apnea or details outlining the events that led to catastrophic outcomes, such as anoxic brain injury.”

Financial Penalties High

As Dr. Bolden reported at SASM’s 2015 annual meeting, critical cases continue to occur in the perioperative period for OSA patients, but the negative effects extend beyond the clinical; adverse outcomes carry a serious financial penalty as well. A review of legal literature by Dr. Bolden and his colleagues (Anesth Analg 2015 Jun 23. [Epub ahead of print]) found that perioperative deaths involving a patient with sleep apnea in the postoperative period led to an average payout of $1.5 million. Furthermore, when there was anoxic brain injury, said Dr. Bolden, the payout increased to more than $4 million. Not surprisingly, he added, the number of lawsuits is increasing over time.

“The majority of malpractice cases involving perioperative complications in OSA patients result from early extubation, failed reintubation or the administration of narcotics in an unmonitored setting,” Dr. Bolden said. “The majority of these cases also appear avoidable.”

Because of these adverse outcomes, both the American Academy of Sleep Medicine and the American Society of Anesthesiologists recommended that hospitals develop their own protocols to manage patients with sleep apnea. However, as Dr. Bolden reported, most have not complied.

“Assembling a series of cases and documenting the details would better highlight the safety concerns in these patients,” Dr. Bolden said. “It would help physicians learn more about the circumstances surrounding these events and possibly acquire data to develop ‘best practices’ for OSA.”

More Cases Needed

Karen L. Posner, PhD, research professor in the Department of Anesthesiology and Pain Medicine, University of Washington Medicine, in Seattle, described the basic inclusion criteria (Table). She assured members of the audience who expressed concerns regarding anonymity that not only are the cases de-identified, but there is legal precedent protecting data from legal discovery in malpractice cases.

Laura Cheney, MD, professor of anesthesia patient safety at University of Washington Medicine, reported that early case insights have already been made. “There were clinical lessons from opioid-induced respiratory depression claims,” said Dr. Cheney. “We concluded that the majority of injuries occurred within 24 hours of surgery, and almost all were judged to be preventable by appropriate monitoring, both in quality and quantity.”

Despite this initial progress, the researchers have yet to reach their desired goals.

“We have 46 cases so far,” said Dr. Cheney, “but that’s not enough for really in-depth analysis. To start seeing patterns and clumps, 100 cases are needed.”

“We really want to encourage members of SASM and nonmembers to submit cases,” Dr. Posner concluded. “It’s only with your help and submission of cases that we can ensure the registry’s success.”

Lawrence A. Lynn, MD, a pulmonologist at the Sleep & Breathing Research Institute in Columbus, Ohio, commended the researchers for their efforts but suggested the registry may not be able to provide information sufficient for deciphering dangerous patterns.

“From a monitoring perspective,” said Dr. Lynn, “we need real time-series data that precede the death or near-miss event for at least one or two hours so that we can define the mechanisms of death. … We need actionable information.”

Dr. Bolden replied that while it certainly would be ideal to have monitoring done for a few hours before the event, most hospitals do not have appropriate protocols in place.

“We thought this would be a good first step to gather information, but there’s no question: We’re going to have some problems establishing cause and effect,” Dr. Bolden concluded. “We do think, however, we will get some valuable information.”

—Chase Doyle

The sources reported no relevant financial disclosures. The registry website can be found at depts.washington.edu/asaccc/projects/obstructive-sleep-apnea-osa-death-near-miss-registry.

**Table.** Inclusion Criteria for Cases Submitted to The Registry

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Example</th>
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<tbody>
<tr>
<td>Patient age 18 years or older at the time of the event</td>
<td>Event occurred in 1993 or later</td>
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<tr>
<td>Patient was diagnosed or suspected of having OSA</td>
<td>Patient was diagnosed or suspected of having OSA before or after the event</td>
</tr>
<tr>
<td>One of the following events suspected to be related to OSA must have occurred within 30 days of surgery:</td>
<td>One of the following events suspected to be related to an adverse event related to OSA:</td>
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<tr>
<td>• Unanticipated death suspected to be related to OSA</td>
<td>• Unanticipated death suspected to be related to OSA</td>
</tr>
<tr>
<td>• Brain injury (diagnosed by a neurologist) suspected to be related to an adverse event related to OSA:</td>
<td>• Brain injury (diagnosed by a neurologist) suspected to be related to an adverse event related to OSA:</td>
</tr>
<tr>
<td>• Event or outcome suspected to be related to OSA:</td>
<td>• Event or outcome suspected to be related to OSA:</td>
</tr>
<tr>
<td>• Respiratory arrest (prolonged ICU from general ward due to respiratory distress)</td>
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<tr>
<td>• Code Blue or ACLS protocol</td>
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</tbody>
</table>

ACLS, advanced cardiovascular life support; OSA, obstructive sleep apnea

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—Norman Bolden, MD