

# Sleep Medicine and Anesthesia

## *A New Horizon for Anesthesiologists*

**I**N October 2010 in San Diego, a group of anesthesiologists, sleep physicians, surgeons, emergency physicians, and basic scientists with an interest in sleep and anesthesia organized an American Society of Anesthesiologists pre-convention symposium on this fascinating topic. This provided the impetus to form the Society of Anesthesia and Sleep Medicine (SASM) to promote discussion, education, development of clinical standards, and research related to issues common to anesthesia and sleep.

The SASM objectives are to:

- Promote the cross-fertilization of ideas between anesthesiology and sleep medicine.
- Encourage clinical and epidemiologic studies determining the associations between sleep-disordered breathing and perioperative risk.
- Examine methods of minimizing perioperative risk of upper-airway obstruction or ventilatory insufficiency in predisposed individuals.
- Explore the use of noninvasive positive airway pressure therapies to prevent and treat perioperative upper-airway obstruction or hypoventilation.
- Stimulate research aiming to better understand the similarities and differences between sleep and anesthesia as well as their impact on physiologic control systems.

Anesthesiology has evolved from a specialty based on procedures to a broader-based discipline.<sup>1</sup> Anesthesiologists are involved in a wide range of perioperative duties and have an evolving role in the care of the surgical patient beyond the immediate perioperative period. The role of the anesthesiologist has changed from one of a physician primarily concerned with intraoperative care and postoperative pain management to one of a perioperative physician responsible for ensuring that patients with preexisting medical conditions are optimally managed perioperatively and beyond.<sup>2</sup> Anesthesiologists have much to offer in mitigating risk to patients during the vulnerable period of perioperative care. Sleep apnea exemplifies a condition that requires expert guidance through the perioperative journey from preadmission to discharge and beyond and illustrates the potential for this

broader perioperative role. Difficult airways have always been a prime concern of the anesthesiologist, and perioperative management of problems related to them is fundamental to anesthesiology practice.<sup>3-5</sup>

Sleep apnea is now regarded as common, underdiagnosed, and associated with substantial morbidity and increased risk of postoperative complications.<sup>6-14</sup> In the early 1990s a major epidemiologic study showed that obstructive sleep apnea syndrome (obstructive sleep apnea with overt symptoms) was found to be present in 2% and 4% of middle-aged women and men, respectively.<sup>6</sup> Subsequent epidemiologic studies have demonstrated a clear association between obstructive sleep apnea and the development of hypertension, coronary artery disease, heart failure, stroke, and metabolic syndrome.<sup>7-9</sup> Obstructive sleep apnea remains underdiagnosed and may be first recognized in the perioperative setting. Given the significant morbidity associated with obstructive sleep apnea syndrome, it is incumbent on the anesthesiologist—the perioperative physician—to ensure that arrangements are made for appropriate diagnosis and treatment when such possibilities are raised.

Sleep medicine and anesthesiology both are concerned with the significant changes in autonomic control associated with the loss of waking consciousness.<sup>15,16</sup> Sleep medicine is a relatively new and vibrant specialty<sup>17</sup> with a solid foundation in neuroscience.<sup>18</sup> Sleep medicine has been enriched by active involvement of basic scientists and by many clinical specialties, including pulmonology, neurology, internal medicine, psychiatry, and otorhinolaryngology. Why not anesthesiology as well? Anesthesiologists are in a unique position to identify patients with potential sleep-related breathing disorders, optimize their perioperative management, and contribute to their continuum of care.<sup>19-25</sup> We encourage anesthesiologists to embrace the role of perioperative sleep physician. Ample data now exist to support the view that anesthesiologists who understand sleep disorders will foster clinical practice, education, and research. We believe this is especially appropriate for a specialty in which airway management is such a fundamental concern.

A SASM steering committee has been formed [Norman Bolden, M.D. (secretary), Frances Chung, M.B.B.S. (vice chair), Matthias Eikermann, M.D., Peter Gay, M.D., David Hillman, M.B.B.S. (chair), Shiroh Isono, M.D., Yandong Jiang, M.D., Max Kelz, M.D., and Ralph Lydic, Ph.D.] to establish a database of interested clinicians and scientists,

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incorporate the Society, empanel a membership, and arrange for the election of a Board, which will then take over management. SASM is organizing another preconvention conference on October 14, 2011 at the American Society of Anesthesiologists meeting in Chicago. Anyone who wishes to consider joining the Society or attending the annual meeting is invited to contact its secretary, Dr. Norman Bolden, at [nbolden@metrohealth.org](mailto:nbolden@metrohealth.org). The SASM website is [www.anesthesiandsleep.org](http://www.anesthesiandsleep.org). There is much work to be done, and we hope that many will choose to get involved in the Society's activities.

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