Aesthesiology and Sleep Medicine have much information and many insights and ideas to share, both clinically and scientifically. Upper airway behavior provides an obvious example. Mastery in management of the “difficult airway” is one of the most fundamental skills in anesthesiology. Not surprisingly, these anatomically and functionally difficult airways are also problematic during sleep and have the keen attention of sleep physicians. At a more fundamental level, there is a growing interest in the shared neurobiology between the states of sleep and anesthesia, with now obvious common ground in the pathways involved in the unconsciousness of each state. Understanding these is leading to new insights into the mechanisms of anesthesia. In turn, anesthesia is providing a context in which to study the effects of unconsciousness on upper airway and other organ function which have implications for sleep. The postoperative period with its rich mixture of residual anesthesia effects, disturbed sleep, sedation and analgesia is a further example of the overlapping considerations between the states.

It is these and related issues that underlie creation of the Society of Anesthesia and Sleep Medicine. Last year Frances Chung and Terence Davidson organised a symposium on “Challenges in the Perioperative Management of OSA Patients” just before the San Diego American Society of Anesthesiology conference. It was the success of this meeting that provided the impetus to form this new society. A steering committee, a logo, a constitution, a website, a series of editorials and other correspondence, and much organisational work have followed. What is most gratifying and affirming is the fact that our growing membership has seen the point of all of this and has joined enthusiastically and purposefully.

We understand just how busy our members are. We are keen to create an environment where ideas and information are exchanged and clinical and scientific enquiry are enhanced. Involvement in these activities will be rewarding enough in itself. Some of you are also able to help on the organisation side of our activities and we welcome that. We are busy creating a committee structure and have concentrated to date on Board, Executive, Conference and Education committee (with its Abstract subcommittee), and Membership committee (with its Newsletter and Website subcommittees). These are taking shape. A Nominating committee, chaired by Peter Gay, has been formed. It is coordinating election of the first Board, which will be endorsed at the first Annual meeting of members on October 14 in Chicago, immediately following our upcoming symposium. The steering committee will step down at this point. The Conference and Education committee, chaired by Frances Chung, has been busy organising this year’s symposium. The program of the CME meeting is exciting and I really urge you to support the Society of Anesthesia and Sleep Medicine by attending the symposium. The Membership committee is being formed to take on responsibility for membership matters, ably handled to date by its chair, Norman Bolden. We plan a Research committee to facilitate research efforts related to our field and a Clinical committee to work with other bodies to enhance clinical and training standards.

I am well aware of the talents that lie within our membership and want to help develop an atmosphere of inclusivity and involvement while avoiding imposing on individuals who want to participate without additional obligation. We are pleased with progress to date. The caliber of the members joining us ensures future success.

I am looking forward to meeting many of you in Chicago in October.

David Hillman
Chair
Steering Committee
The Society of Anesthesia and Sleep Medicine: Advancing the Science and Clinical Practice Common to Anesthesia and Sleep Medicine

The relationships between anesthesia and sleep are well known. This complex and clinically challenging aspect of patient care requires a multidisciplinary approach. It is not surprising that the American Board of Anesthesiology (ABA) in conjunction with the American Boards of Internal Medicine, Family Medicine, Otolaryngology, Pediatrics, and Psychiatry and Neurology has developed a Sleep Medicine Certification.

However, there is no collaborative approach to facilitate interaction between individuals with a common interest in sleep and anesthesia (e.g., anesthesiologists, sleep physicians, surgeons, emergency physicians, and basic scientists). This was the impetus for the formation of the Society of Anesthesia and Sleep Medicine (SASM) with the mission to promote research at this meeting.

In our hope that many will choose to submit an article for possible publication in this newsletter.

Editor's File

Society of Anesthesia & Sleep Medicine

Girish P. Joshi, MB BS, MD, FFARCSI
Professor of Anesthesiology and Pain Management
Director of Perioperative Medicine and Ambulatory Anesthesia
University of Texas Southwestern Medical Center, Dallas, Texas

Satya Krishna Ramachandran MD FRCA
Assistant Professor, Department of Anaesthesiology
University of Michigan Medical School

The Annual Meeting of the American Society of Anesthesiologists

The Common Rule, these principles require an IRB review to adjudicate on the need for informed consent and authorization.

References

Specific purposes of a Sleep Apnea Perioperative Outcomes Registry could include:
1. Predictive value of sleep-disordered symptomatology and disease severity on outcomes
2. Influence of preoperative and postoperative CPAP usage on outcomes
3. Perioperative anesthesia interventions and outcomes
4. Robust risk adjustment of outcomes

However, considerable care needs to be employed to ensure appropriate registry design and data robustness. The Belmont Report in 1979 identified 3 fundamental ethical principles for human subject research namely: respect for persons, beneficence, and justice. Together with The Privacy Rule and The Common Rule, these principles provide the ethical foundations for human subjects’ research. Even registries developed for scientific purposes with a prospect of producing social benefits fall under the purview of these over-arching principles. There are several specific questions of interest:

1. Why do we need Institutional Review Board (IRB) approval? Patient consent and IRB approval are generally not pre-requisites for maintaining databases for quality improvement as this is considered a core function of hospital systems. However, if these data are used for publication in the peer-reviewed literature, an IRB review of the project is essential. Although the project may eventually be deemed exempt and not require subsequent annual IRB consideration, this assessment must be made by the IRB, not the principal investigator.

2. The 3 basic questions that are to be used to ascertain the need for an IRB review and informed consent are:
   a. Are the data intended to be used for research? Even if research was not the original primary purpose, the use of data for research or publication automatically necessitates a formal IRB review.
   b. Are human subjects or their data involved? Human subjects research refers to data collected through intervention or interaction with the individual or identifiable private information. This form of research requires an IRB review to adjudicate on the need for informed consent and accountability act (HIPAA) authorization.

From a payer’s perspective, registries can provide detailed information from large numbers of patients on how procedures, devices, or pharmaceuticals are actually used and on their effectiveness in different populations. This information may be useful for determining coverage policies.

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References
Is it realistic to screen patients for sleep apnea AND obtain polysomnography preoperatively? A case discussion highlighting the University of Chicago experience

A 69 year old man with osteoarthritis is evaluated for a total knee replacement, and scheduled for one week from today. He has several risk factors for obstructive sleep apnea (OSA) but has never had a sleep study.

Although many major academic medical centers and other large anesthesia practices have preoperative clinics to evaluate patients before the day of surgery, many smaller centers do not have this luxury. In clinics like ours, patients can be screened for OSA and undergo polysomnography (PSG) preoperatively. But is this realistic? The University of Chicago Anesthesia Perioperative Medicine Clinic (APMC) has collaborated with the Department of Medicine and the Sleep Medicine Center to obtain preoperative PSG in all patients deemed at risk for OSA, to examine both its feasibility and possible benefit.

The surgeon’s office makes an appointment for our patient with the APMC that afternoon. An anesthesia resident evaluates the patient in clinic and collects his medical data. On the STOP-BANG screening questionnaire, the patient scores a 5, indicating that he is at high risk for OSA.

OSA remains undiagnosed in the majority of patients, and rates tend to be higher in surgical populations. Not all cases of OSA are clinically obvious; some cases of OSA may be found only by specifically screening pre-surgical patients. The cost of preoperative screenings resulting in false positives, unnecessary polysomnograms, admissions, and monitoring, also must be considered. The gold standard test for OSA diagnosis is the PSG, which is often conceptualized as expensive and impractical, particularly in the preoperative period.

The resident discusses the patient with the clinic anesthesiologist, and preoperative planning includes referral to the Sleep Medicine Center for a preoperative PSG. The importance of an OSA diagnosis is discussed with the patient, who agrees to make an appointment with some reluctance, saying “I have survived other surgeries just fine without this sleep study.”

In 2009, our preoperative clinic began screening patients for OSA with the STOP-BANG questionnaire. In collaboration with the Sleep Center, a requisition is faxed from the clinic and the patient is contacted by phone to arrange an appointment. The Sleep Center guarantees completion of a preoperative PSG for patients with a STOP-BANG score ≥ 3, and initiation of continuous positive airway pressure (CPAP) therapy if indicated, with an appointment made available within 3 days of referral if patients agree.

When the Sleep Center contacts the patient he refuses a PSG. The next day he calls the APMC and says he does not need “all of this unnecessary testing” before surgery. The short-and long-term risks of undiagnosed OSA are explained to him in detail, and after discussion with his surgeon, he is notified that anesthesia services will not be provided unless he has the appropriate testing before his elective procedure. The patient schedules his sleep study the next day.

Several logistical problems were identified while implementing and improving our preoperative OSA screening program. The most common is that patients simply do not comply with recommendation for polysomnography, despite open availability and ease of scheduling provided by our Sleep Center. Opinions also differed amongst clinic attending anesthesiologists as to when, and on whom, PSG should be performed. A key component involved sharing PSG data on our patient referrals with our providers. Continued over
Once they saw that the majority of patients referred from the APMC met criteria for moderate-severe OSA and over 50% obtained CPAP devices preoperatively, the providers realized the feasibility of this program. Education of attending anesthesiologists, residents, and physician assistants has led to greater compliance with screening recommendations. Frank discusses with patients about the rationale for, and importance of, diagnosis and treatment of OSA can improve compliance as seen in our case.

As of March 2011, 432 patients have been referred to the Sleep Center after being identified in the APMC as high risk for OSA. Of these, only 213 (49%) completed a PSG, in spite of unlimited access. Of half of patients with STOP-BANG scores ≥ 3, and the great majority of those with STOP-BANG score ≥ 5 had higher body mass indices and apnea-hypopnea indices, and spent significantly more total sleep time with oxygen saturations < 90% (Table 1). As our process has evolved, and based on data obtained from sleep studies over the past 2 years, only patients with STOP-BANG score ≥ 5 are now routinely referred for PSG.

In areas where PSG is not readily available, and patients are not routinely seen by an anesthesiologist before surgery, screening could be initiated in the surgeon’s or the primary physician’s office. Even screening on the day of surgery can identify those at high risk based on the STOP-BANG score alone. Then an anesthesiologist can be tailored to a patient with a high likelihood of having OSA, and CPAP therapy can be initiated postoperatively. Our data (Table 2) suggest that using a PSG with pressures of 8-12 cmH2O should be adequate for the majority of patients who require CPAP. Our patients could have been treated with this approach had he been willing to obtain the study. However, in-hospital postoperative CPAP does not provide the possible long-term health benefits of continued home CPAP therapy and follow-up with Sleep Medicine specialists.

We practice for proactive OSA screening implementation is as follows:

1. Screening for OSA is recommended with the STOP-BANG questionnaire, either during the preoperative anesthesia, surgery, or primary care physician visit, including on the day of surgery.

2. STOP-BANG is a sensitive and relatively specific test (if a score of ≥ 5 is used as a cutoff for increased risk) that correlates well with PSG results.

3. Timely presurgical CPAP and initiation of CPAP is a possibility for patients identified at high risk by screening.

4. Compliance is the main barrier to screening implementation is as well with PSG results.

5. Alternatively, in high-risk patients identified by screening questionnaire but unable or unwilling to undergo preoperative PSG, a presumptive diagnosis can be made. An anesthetic plan can be tailored to the presumed diagnosis, and CPAP therapy can be initiated postoperatively (8-12 cm H2O) if necessary.

The first meeting of a special interest group interested in anesthesiology and sleep medicine took place on October 14, 2010 in San Diego. Frances Chung, MD, Professor of Anesthesiology, University of California, San Diego School of Medicine, United States organized this meeting entitled “Challenges in the Perioperative Management of OSA Patients”. This meeting succeeded in bringing together an international, interdisciplinary gathering of anesthesiologists, sleep medicine specialists, surgeons, internists, emergency medicine physicians, and researchers to discuss perioperative management of patients with obstructive sleep apnea (OSA).

Jean Wong, MD
Toronto, Canada

Report of the First Meeting of SASM Titled “Challenges in the Perioperative Management of OSA Patients”

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Jean Wong, MD, University of California at San Diego, organized this meeting entitled “Challenges in the Perioperative Management of OSA Patients”. The next annual meeting will be held on October 14, 2011 in Chicago, Illinois.
Treasurer:
Peter Gay: Past-president of NAMDRC and while acting as their advocate for patients with pulmonary and sleep problems, helped establish reimbursement for many current positive airway pressure therapies. He is recent Past-Chair of the ACCP HomeCare Network and has been a member of several AASM committees and guideline authorship groups. He is the director of the ACCP January Sleep Review Course and has special interest in the use of novel equipment for the use of noninvasive ventilation treatment in patients with acute and chronic respiratory failure. He is the recipient of the Sepracor Achievement Award for Excellence in Pulmonary Disease Management.

President:
David Hillman: Head of the Department of Pulmonary Physiology and Sleep Medicine at Sir Charles Gairdner Hospital in Perth, Western Australia and director of the West Australian Sleep Disorders Research Institute. He is an anesthesiologist and sleep physician. His clinical and research interests are centered on respiratory and upper airway physiology and their relationship to sleep disorders and anesthesia. He has published extensively in related areas. He is a Clinical Professor at the University of Western Australia, immediate past president of the Australasian Sleep Association, founding chair of Australia’s Sleep Health Foundation and chairs the steering committee of the Society of Anesthesia and Sleep Medicine.

President-Elect:
Frances Chung, MD: Professor of Anesthesiology at University of Toronto and Medical Director, Ambulatory Surgical Unit, University Health Network. She is associate editor of Anesthesiology, Chair of Canadian Ambulatory Anesthesia Education and Research group and past president of Society for Ambulatory Anesthesia (SAMBA). Her research interest is in perioperative management of OSA. She developed the STOP-Bang questionnaire, a widely used OSA screening tool. Her research was recognized by multiple awards including Research Recognition Award from Canadian Anesthesiologist's Society and Distinguished Services Award from SAMBA. She is the vice-chair of the steering committee of Society of Anesthesia and Sleep Medicine and chair of SASM CME meeting.

Secretary:
Norman Bolden, MD: Assistant Professor of Anesthesiology at Case Western Reserve University, Director of Obstetric Anesthesia, and Vice-Chairman of Anesthesiology at MetroHealth Medical Center. Dr. Bolden’s research interests include perioperative complications in patients with Obstructive Sleep Apnea and anesthetic complications in obese parturients. Dr. Bolden is a member of the steering committee of the Society of Anesthesia and Sleep Medicine and has been serving in the capacity of Acting Secretary/Treasurer for SASM.

Notes on Current Committee:
1. Board (to be appointed at AGM in October 2011) (Currently the Steering Committee (Norman Bolden (secretary), Frances Chung, Matthew Eikermann, Peter Gay, David Hillman (chair), Max Kelz, Shiroh Isono, Ralph Lydic) acts in its place).

2. Executive Committee: Norman Bolden, Frances Chung, David Hillman (chair), Peter Gay

3. Nominating Committee: Norman Bolden, Peter Gay (chair), Ralph Lydic

4. Conference and Education Committee: Frances Chung (chair), Peter Gay, Yandong Jiang, Roop Kaw, Shiroh Isono, Atul Malhotra, Babak Mohklesi, Timothy Morgenthaler


6. Membership Committee: Dennis Auchley, Norman Bolden (chair (ex officio, as secretary), Matthew Chan, Frances Chung, Peter Gay, David Hillman, Roop Kaw, Girish Joshi, Babak Mohklesi, Roman Schumann.

7. Newsletter Subcommittee: Carolyn D’Ambrosio, Nik Gravenstein, Girish Joshi (chair), Satya Ramachandran, Roman Schumann, Jean Wong

8. Website Subcommittee: Norman Bolden (chair), J Laneé Lichtor, John Mitchell, Leopoldo Rodriguez

9. Finance Committee (same membership as executive committee): Norman Bolden, Frances Chung, Peter Gay (treasurer (chair), David Hillman

10. Research Committee: tba

11. Clinical Committee: tba

Society of Anesthesia and Sleep Medicine
Organizational Chart

President:
David Hillman

President-Elect:
Frances Chung, MD

Secretary:
Norman Bolden, MD

Treasurer:
Peter Gay

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11. Clinical Committee: tba

Society of Anesthesia and Sleep Medicine
Recommended Slate of Candidates from the 2011 Nomination Committee

President:
David Hillman

President-Elect:
Frances Chung, MD

Secretary:
Norman Bolden, MD

Treasurer:
Peter Gay
Babak Mokhlesi, MD: Associate Professor of Medicine and the director of the Sleep Disorders Center and Fellowship program at the University of Chicago Pritzker School of Medicine. During the last few years his research has focused on obstructive sleep apnea, especially in patients with obesity hypoventilation syndrome. He is also interested in perioperative outcomes of patients with sleep-disordered breathing. In addition to authoring several book chapters and articles, Dr. Mokhlesi sits on the editorial board of Chest. And the Proceedings of the American Thoracic Society and is a reviewer for the journals Amer J Resp Crit Care Med, Sleep, and the J Clin Sleep Med.

Ralph Lydic, PhD: Bert La Du Professor of Anesthesiology, Professor of Molecular and Integrative Physiology, and Associate Chair for Anesthesia Research at the University of Michigan. The goals of Lydic's research program are to elucidate the neurochemical and signal transduction processes by which sleep, opioids, and anesthetics depress breathing and arousal. The evolutionary perspective supports the view that neurons generating sleep and wakefulness preferentially modulate the ability of opioids, hypnotics, and anesthetics to obtund wakefulness.

Roop Kaw, MD: Associate Professor with the Cleveland Clinic Lerner College of Medicine and holds joint appointments with the Departments of Hospital Medicine and Outcomes Research (Anesthesiology Institute). His research focuses on novel predictors of cardiopulmonary risk in patients undergoing Cardiac and Non-cardiac surgery. He directs the Research Committee with the Department of Hospital Medicine and is a member of Outcomes Research consortium, anesthesia's largest international academic research organization. He has been funded by the NINDS (NIH) for studying the incremental risk of Sleep Apnea in cardiac surgical patients. Dr. Kaw has published more than 30 scientific papers as well as presented more than 50 scientific abstracts nationally and internationally.
OSA, Anesthesia and Sleep
The Common Ground Conference

CONFERENCE DESCRIPTION
This conference, presented by The Society of Anesthesia and Sleep Medicine (SASM) and The University of Chicago, has been developed as an educational opportunity to present and discuss the basic and more controversial areas of sleep apnea and anesthesia.

The objective of this meeting is to provide a forum for discussions pertaining to the common grounds between obstructive sleep apnea, sleep and anesthesia. The goal is to promote excellence in medical care, research and education in anesthesia, sleep medicine, and perioperative medicine.

LEARNING OBJECTIVES
Upon completion of this activity, participants will be able to:
- Review the shared pathogenetic mechanisms of increased upper airway collapsibility during anesthesia and sleep;
- Interpret the neurophysiological correlates of loss of consciousness, unconsciousness and recovery of consciousness under general anesthesia;
- Determine the perioperative management in adenotonsillectomy in a child with OSA;
- Formulate how to implement screening for OSA in a Preoperative Clinic;
- Analyze the evidence of postoperative complications of OSA patients in medical literature;
- Determine which postoperative patients with OSA need monitoring;
- Formulate algorithms for the perioperative management of OSA patients;
- Appraise the impact of sleep apnea and episodic hypoaxemia on ventilatory control and hemodynamics;
- Review the influence of opioids, anesthetics and their interaction on the control of breathing;
- Determine that recognition and treatment of obesity hypoventilation syndrome in the perioperative period can potentially reduce complications;

Please join us for what promises to be an informative and thought-provoking conference!

www.anesthesiaandsleep.org