



Society for Ambulatory Anesthesia

Ambulatory AnesthesiaSM

PRESIDENT'S MESSAGE

It Is Your Society – Let's Keep It Growing

By J. Lance Lichtor, M.D.
SAMBA President

San Francisco, the site of the SAMBA Mid Year Meeting and ASA Annual Meeting, was beautiful. The weather was ideal, the city was fun to visit, and meeting with colleagues was enjoyable. There were nearly 200 participants in SAMBA's Satellite Symposium, the largest number in the symposium's four-year history. This meeting was the first to be recorded, and our Web site <www.sambahq.org> offers the lectures and discussions online to those who could not attend. Attendees may wish to view again a lecture that was of particular interest to them. Some of us can catch up on a point that we missed or would like to listen to again. Although continuing medical education credits are not given for attending an online version of the lectures, we hope to credit online attendance for a fee in the future. Let us know what you think about this technology!

At the meeting, there was quite a bit of discussion on how much the government should intervene in the practice of medicine, particularly as regulation relates to office-based practices. Roughly two months before the meeting, the state of Florida put a three-month moratorium on all office surgery, based in part on five deaths involving problems with anesthesia in relatively healthy patients undergoing less serious procedures. All these deaths occurred in the previous six months, one month before the moratorium. Two people died since the moratorium but neither death was related to

surgery. A recent editorial in the Mayo Clinic Proceedings¹ summarized office-based anesthesia deaths and noted that the deaths after office-based surgery have resulted in death rates not seen since several decades ago. Reasons cited include cheap, poorly maintained equipment and poorly trained personnel. This column was written three weeks after the meeting when the Florida Board of Medicine allowed office surgeries to resume, but not without restrictions. Florida cer-

... we cannot rest until we prove ... that we understand the problem and are willing to do something about it.

tainly is not the only state that has passed legislation: Texas and New Jersey also have. Although some might decry the use of regulation to guarantee patient safety, as a profession, we have been unable to do this on our own.

What should SAMBA do about this issue? SAMBA's role is primarily educational. We have stayed away from developing policies or guidelines, relying on our parent organization, the American Society of Anesthesiologists (ASA), to do that. In fact, ASA has adopted guidelines for office-based anesthesia and qualifications of anesthesia providers in the office. SAMBA has recently become a member of the Accreditation Association for Ambulatory Health Care, Inc. That organiza-



J. Lance Lichtor, M.D.

tion has accredited office-based anesthesia providers. To guide us on our educational endeavors, we also have a Committee on Office-Based Anesthesia, whose current chair is Scott R. Springman, M.D. Past and future meetings have also reserved time for the discussion of this issue. Although these efforts sound good, we really cannot rest until we prove to ourselves and the public that we understand the problem and are willing to do something about it. Whatever we do, we individual SAMBA members must continue down the path of excellent care in the office that we started with ambulatory operating rooms connected to hospitals and freestanding ambulatory surgical centers. What do you think we should do? Are we doing enough?

Reference:

1. Arens JF. Anesthesia for office-based surgery: Are we paying too high a price for access and convenience? *Mayo Clin Proc.* 2000; 75:225-228. 

EDITOR'S PAGE

Be a Part of the Trend – Join SAMBA

The exponential growth in ambulatory and office-based surgery has created new challenges for anesthesiologists. In order to remain in the forefront, it is imperative that ambulatory anesthesiologists keep abreast of the new changes occurring in this specialty. SAMBA activities such as the educational programs and the newsletter keep the members informed about new and cutting-edge developments in outpatient anesthesia. I invite you to become a member of SAMBA and support the basic goals of our Society. As suggested by SAMBA President J. Lance Lichtor, M.D., there are numerous benefits in becoming a SAMBA member. You can join SAMBA by completing the application form contained within this newsletter, or you can apply online by visiting our Web site <www.sambahq.org>.

The SAMBA Fourth Annual Mid Year Meeting was held last October in San Francisco, California. Approximately 200 attendees benefited from the excellent educational program organized by Mid Year Meeting Chair Andrew Herlich, M.D., Philadelphia, Pennsylvania. This was a very lively

meeting involving much discussion that might be continued over the SAMBA Web site. For those who missed the meeting, the lectures can be reviewed on the Web site. I would invite all of you to visit the Web site, which is becoming increasingly popular as evidenced by numerous hits last September. In this issue, Dr. Herlich summarizes the various lectures, which highlighted the controversies in adult and pediatric anesthesia.

The recent American Society of Anesthesiologists (ASA) Annual Meeting highlighted changes taking place in ambulatory anesthesia and the increasing popularity of office-based surgery. Mary Ann Vann, M.D., Boston, Massachusetts, summarizes the breakfast panel on "Regional Anesthesia in Ambulatory Surgery." It is now well accepted that use of regional anesthesia techniques will allow us to expand the practice of ambulatory anesthesia, reduce health care costs and improve patient satisfaction. Lucinda L. Everett, M.D., Seattle, Washington, has an excellent review of interesting poster presentations during the ASA Annual Meeting. Raymond G. Borkowski, M.D.,



Girish P. Joshi, M.D.

and Brian M. Parker, M.D., from the Cleveland Clinic, give us a great review of the poster sessions on postoperative nausea and vomiting, the preoperative evaluation and the use of various anesthetic techniques.

Lee A. Fleisher, M.D., Johns Hopkins Medical Center, provides us with some background information of his outcomes research project titled "Impact of Location of Care and Patient

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SAMBA MID YEAR MEETING REPORT

No Debate Here: Lively Mid Year Meeting a Success

By Andrew Herlich, M.D., Chair
Committee on Mid Year Meeting
Philadelphia, Pennsylvania

SAMBA held its Fourth Annual Mid Year Meeting in San Francisco, California, this year. The meeting's central theme was controversies in ambulatory anesthesia. Adult and pediatric anesthesiologists as well as private and academic practitioners contributed to a diverse and interesting program.

The keynote speaker was current SAMBA President **J. Lance Lichtor, M.D.**, Chicago, Illinois, who addressed concerns as to how far we should take ambulatory anesthesia. Dr. Lichtor explained that all surgery cannot be ambulatory and due to such usual surgical constraints as drains, extensiveness of the procedure, pain, postoperative nausea and vomiting and inadequate oral intake, the expansion of ambulatory surgery is constrained. In contradistinction, more complex procedures such as radical retropubic prostatectomy or mastectomies are being performed on an ambulatory basis.

Despite societal wishes (including third-party payers), adequacy of pain control and control of postoperative nausea and vomiting are keys to early ambulation and nutrition. Judicious use of local anesthesia via catheters such as epidural or continuous sciatic nerve blocks dramatically reduced the need for opiate analgesic in the patient at home. However, there are no nurses to check catheter function or cleanliness in the home environment. A patient who develops confusion at home may receive a toxic dose of a local anesthetic that would be picked up much earlier in the inpatient environment.

Finally, economic pressures have contributed to pushing the envelope in terms of safety and more procedures in a shorter period of time. Additionally, and with greater frequency, more practices are leaving urban environments for the comfort of suburbia with its greater patient and staff convenience. Despite all of these pressures, we must advocate a similar standard of care irrespective of the practice locale.

Ronald S. Litman, D.O., Rochester, New York, presented his views on the safety of pediatric procedures away from the operating room environment. Since the pediatric patient may require sedation or general anesthesia in situations that most adults do not require, guidelines need to be established, maintained and enforced. These guidelines should be maintained irrespective of who is performing the sedation.

Dr. Litman emphasized the need for guidelines/standards of care at the site, during transport and in the recovery location. The controversy of where to recover the pediatric patient was discussed. Relevant questions were, "Is the recovery location a long distance from the anesthetizing location?" and "Are there sufficient numbers of nurses to recover the patient at the anesthetizing site?" The anesthesiologist's comfort with the procedure and the anesthetic technique may be the most crucial element to a safe procedure.

Management of the difficult airway in the ambulatory environment was the topic of **Martin S. Bogetz, M.D.**, San Francisco, California. Dr. Bogetz emphasized that the ambulatory environment per se should not be the limiting factor in managing the patient with the difficult airway. Many children with congenital anomalies undergoing radiological, dental or otolaryngological procedures have difficult airways. Using a well-rehearsed algorithm such as the ASA Difficult Airway Algorithm will reduce the likelihood of adverse outcomes when managing the difficult airway on an ambulatory basis. Use of monitored anesthesia care or regional anesthesia in the face of a difficult airway may be acceptable when the surgical procedure can be stopped at any juncture and a safe, awake airway can be established. Finally, the importance and utility of devices such as the laryngeal mask airway or the cuffed oropharyngeal airway were highlighted.

Mehernoor F. Watcha, M.D., Philadelphia, Pennsylvania and **Phillip E. Scuderi, M.D.**, Winston-



Andrew Herlich, M.D.

Salem, North Carolina, debated pro and con comments with respect to the use of prophylactic antiemetics. Dr. Watcha used humor and patient satisfaction, efficacy and cost-effectiveness data to propose his point of view. In some cases, Dr. Watcha used data from Dr. Scuderi to prove his point of view by changing the interpretation of the data. He did admit that the routine use of prophylactic antiemetics in low-risk patients is probably not warranted. However, in patients with a moderate risk of postoperative nausea and vomiting (PONV), prophylactic droperidol is indicated. In the pediatric population ondansetron may be more useful. High-risk patients probably require steroid prophylaxis as well as ondansetron.

Dr. Scuderi presented compelling data, in some cases the same data as Dr. Watcha, to propose that prophylactic antiemetic administration is not warranted. Dr. Scuderi clearly delineated the difference between efficacy versus outcome. Importantly, he also identified the difference between prevention versus treatment. Timely administration of treatment antiemetics have similar patient satisfaction, discharge times and return to activities of daily living as patients who were administered prophylactic antiemetics. Data at this time suggest that timely

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Mark your calendar now and plan to attend the SAMBA 16th Annual Meeting on May 3-5, 2001, at the Renaissance Esmeralda Resort in Indian Wells (Palm Springs), California. Long recognized as the leading educational program in ambulatory anesthesia, the 16th presentation of the SAMBA Annual Meeting will once again feature outstanding scientific programs, business sessions and exciting social activities.

Program Chair Walter G. Maurer, M.D., and the Committee on Annual Meeting have assembled a faculty

of renowned experts who will address issues of latest concern to SAMBA members.

Registration information will be mailed in mid-January and will also be available on the SAMBA Web site. As a membership benefit, SAMBA members will receive a discount off the regular registration fees for the general meeting and the preconvention workshops.

We look forward to seeing you in warm and sunny Palm Springs!

SAMBA 16th Annual Meeting Scientific Program

May 3-6, 2001
Esmeralda Resort
Indian Wells (Palm Springs), California

Wednesday, May 2, 2001

5 p.m. – 9 p.m.
PRECONVENTION WORKSHOP – PART 1
Pediatric Advanced Life Support
(Limited attendance. Separate advance registration required.)

Thursday, May 3, 2001

8 a.m. – 5 p.m.
PRECONVENTION WORKSHOP – PART 2
Pediatric Advanced Life Support (Limited attendance. Separate advance registration required.)

4 p.m. – 8 p.m.
Registration

OPTIONAL CONCURRENT WORKSHOPS
(Limited attendance. Separate advance registration required.)

5 p.m. – 7 p.m.
Workshop 1 "Practical Uses of Technological Toys"
(Palm Pilot, Internet, etc.)
Moderator: Martin S. Bogetz, M.D.

5 p.m. – 7 p.m.
Workshop 2 "Perioperative Medicine – Problem-Based Learning Discussion Format"
Moderator: Lee A. Fleisher, M.D.

7 p.m. – 11 p.m.
Social Tour: Palm Springs Village Fest and Dinner
Outing at Muriel's Supper Club
(Separate tour registration required.)

Friday, May 4, 2001

7 a.m. – 7:55 a.m.
RESEARCH-POSTER BREAKFAST DISCUSSION

7 a.m. – 1 p.m.
Registration

7:55 a.m. – 8 a.m.
Opening Session
Walter G. Maurer, M.D., Program Chair

8 a.m. – 9:45 a.m.
Office-Based Anesthesia
Moderator: Rebecca S. Twersky, M.D.

9:45 a.m. – 10:15 a.m.
COFFEE BREAK in Exhibit and Poster Area

10:15 a.m. – 12 noon
Presentation of Cases in the Real World
Moderator: Barbara S. Gold, M.D.
Panelists: Martin S. Bogetz, M.D.
Frances Chung, M.D.
Louis A. Freeman, M.D.
Kathryn E. McGoldrick, M.D.

12 noon – 1:30 p.m.
LUNCH WITH DISCUSSION LEADERS
Moderator: Ronald S. Litman, D.O.

Sponsors Recognition
SAMBA Travel Awards
Ambulatory Anesthesia Research Foundation Awards
Distinguished Service Award

ASA Update
Neil Swissman, M.D., President
American Society of Anesthesiologists

1:30 p.m. – 3 p.m.
Desserts in Exhibit and Poster Area

1:30 p.m. – 5:30 p.m.
Social Tour: Horseback Riding Tour
(Separate tour registration required.)

1:30 p.m. – 5:30 p.m.
Social Tour: Canyon Jeep Tour
(Separate tour registration required.)

2:30 p.m. – 6 p.m.
Board of Directors Meeting

Saturday, May 5, 2001

7 a.m. – 7:55 a.m.
RESEARCH-POSTER BREAKFAST DISCUSSION

7:55 a.m. – 8 a.m.
Announcements
Lydia A. Conlay, M.D., Ph.D., Program Vice-Chair

7 a.m. – 1 p.m.
Registration

8 a.m. – 9:45 a.m.
Regional Anesthesia
Moderator: Michael F. Mulroy, M.D.

9:45 a.m. – 10:15 a.m.
COFFEE BREAK in Exhibit and Poster Area

10:15 a.m. – 12 noon
Medicolegal Issues – Up Close and Personal
Moderator: Kathryn E. McGoldrick, M.D.

12 noon – 1:30 p.m.
LUNCHEON
Outgoing President's Message
J. Lance Lichtor, M.D.

OPTIONAL CONCURRENT WORKSHOPS
(Limited attendance. Separate
advance registration required.)

2 p.m. – 6 p.m.
Workshop 3
Nose to Toes – Hands-on Regional Anesthesia
Moderator: Kenneth Zahl, M.D.

2 p.m. – 4 p.m.
Workshop 4
Children in the Dentist's Chair – Pediatric Dental
Anesthesia
Moderator: Richard L. Finder, D.M.D., M.S.

4 p.m. – 6 p.m.
Workshop 5
New Venues – Medical Challenges
Moderator: Beverly K. Philip, M.D.

3 p.m. – 5:30 p.m.
Social Tour: Covered Wagon Tour
(Separate tour registration required.)

6:30 p.m. – 9:30 p.m.
SAMBA MEXICAN FIESTA
(Separate advance registration required.)

Sunday, May 6, 2001

7 a.m. – 8 a.m.
GENERAL MEMBERSHIP BREAKFAST MEETING
Presiding: J. Lance Lichtor, M.D.

7 a.m. – 12 noon
Registration

8 a.m. – 9:45 a.m.
Sedation/Analgesia Update
Moderator: Burton S. Epstein, M.D.

9:45 a.m. – 10:15 a.m.
COFFEE BREAK

10:15 a.m. – 12 noon
Dealing with the Pressures
Moderator: Ronald H. Wender, M.D.

12 noon
Adjournment

No Debate Here: Lively Mid Year Meeting a Success

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treatment of PONV is the key and is just as effective as prophylaxis. During the discussion portion of the session, both Dr. Watcha and Dr. Scuderi admitted that their rescue treatments and prophylaxis of high-risk patients is quite similar.

Walter G. Maurer, M.D., completed the morning session with a comprehensive analysis of a well-functioning preanesthetic consultation service and its benefits. Dr. Maurer practices at the Cleveland Clinic. The process clearly works at his institution where the surgeons, primary care physicians and anesthesiologists do their best to communicate respective concerns to each other in a highly structured information management system. Each party, including the nursing service, has ownership in the process and has articulated the concerns and goals prior to initiating the process. The cancellation rates as well as the frequency of dissatisfied patients reporting their problems to the administration at the Cleveland Clinic are remarkably low. Additionally, the cost of running such a perioperative process has been quite cost-effective.

The afternoon session started with a pro and con discussion over the fate of succinylcholine. **Tom C. Krejcie, M.D.**, Chicago, Illinois, presented data suggesting that the use of succinylcholine in the ambulatory environment is not warranted. With the availability of relatively short-acting agents such as mivacurium and rapacuronium, succinylcholine, with its attendant risks, is no longer justified.

Stephen F. Dierdorf, M.D., Indianapolis, Indiana, presented the opposite point of view. He said rapacuronium is not the panacea it was thought to be. Bronchospasm in physiological doses and the need for reversal in some instances may limit its usefulness. Additionally, rocuronium may have a prolonged effect, while mivacurium may have a delayed onset. Despite the known association of postoperative myalgias and hyperkalemia in

certain patients, no other agent is as predictable in its onset when tracheal intubation is urgently needed. Other concerns such as elevation of intragastric or intracranial pressures may be clinically insignificant.

Peter S. Glass, M.D., Stony Brook, New York, discussed the issue of generic medications and their impact upon our practice patterns. Dr. Glass focused on propofol and its recent generic formulation. Despite economic issues between the manufacturer of the brand name propofol and its

Dr. Randel stressed the need for medical school curricula to emphasize personal coping strategies and to espouse a wellness focus. Taking time out for your own well-being is important, and a positive mental attitude should be emphasized.

generic competitor, little data have been generated in head-to-head trials. Much of the objections have come from the addition of metabisulfite and its potential for allergic reactions. Additional concerns have been raised concerning its yellowing discoloration from its dimer formation when exposed to air. Despite these concerns, Dr. Glass suggested that neither potency diminution has occurred nor have any Food and Drug Administration alerts been sounded.

The final session of the meeting addressed the concerns of the anesthesia practitioner and his or her personal well-being. **Gail I. Randel, M.D.**, Chicago, Illinois, discussed the stresses that we face in our everyday lives, both inside and outside the practice environment. The stresses outside of the

operating room include lack of sleep, decreased family time, lack of personal relationships and lapses in attention to personal health. Dr. Randel stressed the need for medical school curricula to emphasize personal coping strategies and to espouse a wellness focus. Taking time out for your own well-being is important, and a positive mental attitude should be emphasized. Inside of the operating room environment, Dr. Randel reported that latex allergy has affected many anesthesiologists, including some who have had to retire and accept disability. Anesthesiologists' awareness of latex allergy and avoidance strategies were discussed.

The final presentation of the day came from **David Mayer, M.D.**, Seattle, Washington. He presented his transition from the clinical practice to the corporate life via the "E" market. Dr. Mayer is President of Esurg®, an e-commerce firm that specializes in assisting office-based physicians to obtain equipment and pharmaceuticals with the same ease as big hospital and consortium buyers. The fact that medical schools have developed joint M.D./M.B.A. programs are testimony to the fact that physicians are assuming roles in both the medical and business worlds.

Dr. Mayer emphasized that using the W. Edwards Deming model of continuous quality improvement will ultimately improve quality and decrease costs. Wanton cost-cutting techniques without attention to quality only produce poorer service or quality of care. Techniques in the establishment of start-up firms were discussed. These techniques included the assembling of financial backers, a winning team with a positive "can do" attitude and, most importantly, being a good leader in the face of difficult decision-making.

The meeting was punctuated by lively participation by both the attendees and the speakers during the discussion periods. We are looking forward to next year's meeting on October 12, 2001, in New Orleans 

Breakfast Panel Dishes Up Hot Topic: Regional Anesthesia

By Mary Ann Vann, M.D.
Staff Anesthesiologist
Beth Israel Deaconess
Medical Center Instructor
Harvard Medical School
Boston, Massachusetts

The American Society of Anesthesiologists (ASA) Annual Meeting in San Francisco, California, hosted several forums focusing on ambulatory anesthesia. The SAMBA breakfast panel, moderated by **Michael F. Mulroy, M.D.**, Seattle, Washington, was titled "Regional Anesthesia in Ambulatory Surgery."

The first speaker at the breakfast panel, **Roy A. Greengrass, M.D.**, Durham, North Carolina, highlighted common problems in the expanding practice of ambulatory anesthesia. He proposed that regional anesthesia can solve many of these problems by controlling postoperative pain, avoiding nausea and vomiting and making the recovery process more predictable. He added that the use of regional anesthesia can result in cost savings and enhanced patient satisfaction.

Dr. Greengrass described various regional techniques for the upper extremity. He noted that the axillary plexus technique is the most frequently performed block, and it has the highest failure rate. For lower extremity cases, he prefers limb-specific blocks that result in minimal hemodynamic effects and less impact on postanesthesia care unit (PACU) stays. At Duke, anesthesiologists administer paravertebral blocks for breast surgery and ventral and umbilical hernia repairs. He described their technique of using a pediatric Tuohy needle, inserted 2.5 cm lateral to the transverse processes, for injection of ropivacaine. This provides 18 hours of analgesia for the patient. The potential complications of this procedure are epidural spread, subdural injection and seizures.

Finally, Dr. Greengrass shared his recommendations for success with regional anesthesia: Do not insert blocks under general anesthesia (GA), use an

appropriate nerve stimulator, utilize a 1 ml test dose of local anesthetic, and test the block before entering the operating room. He described the future of regional anesthesia, where new preparations of local anesthetics in liposomes or hydrogels will allow a single injection to last for days.

The second speaker on the panel, **Steven Klein, M.D.**, Durham, North Carolina, discussed "Expanding Ambulatory Regional Anesthesia" into the area of postoperative pain control. Dr. Klein utilizes continuous catheter regional blocks. Patients receive infusions of local anesthetics through these catheters at home. The patients are carefully selected and educated on the signs and symptoms of toxicity and how to discontinue the infusion. Telephone assessments occur twice daily, and patients have access to a visiting

Staffing costs decreased since regional anesthesia patients required fewer PACU nursing interventions than GA patients.

nurse. In addition, there must be an educated, reliable caregiver. Ropivacaine blood levels are similar to those found during epidural infusions. Dr. Klein also mentioned intra-articular catheters, which have the advantage of being simple and quick but may have limited uses because they provide poor soft tissue coverage.

Brian A. Williams, M.D., Pittsburgh, Pennsylvania, addressed "Making an Ambulatory Center Regional Anesthesia Friendly." His work at the University of Pittsburgh was partially funded by a SAMBA Young Investigators Award. He described how he accomplished changes in his facility despite physical constraints and an ingrained inpatient culture. New quality indicators were adopted for outpatients that focused on improving care, attending to patient needs, emphasizing



Mary Ann Vann, M.D.

ing symptom prevention as well as decreasing turnover time and introducing PACU bypass. Clinical pathways for GA, regional and combined techniques were implemented. The concept of anesthesia controlled time (ACT) was introduced. This time plus turnover time is the time period that surgeons are unable to work. At his center, regional anesthesia had the lowest ACT since he performs the blocks prior to the end of the previous case.

The results of the changes at his center were increasing orthopedic case-loads, with 90 percent of those cases under regional anesthesia. Staffing costs decreased since regional anesthesia patients required fewer PACU nursing interventions than GA patients. Dr. Williams and colleagues also examined the data along cost-benefit lines and patient outcomes: willingness to pay analysis. He presented an abstract at the ASA Annual Meeting on their experience with anterior cruciate ligament reconstruction. They determined that regional anesthesia was 40 times more cost-beneficial than GA.

The final speaker at the breakfast panel was **Robert Williams, M.D.**, Burlington, Vermont. His lecture was titled "Pediatric Regional Anesthesia — Spinals, Caudals and Beyond." His recommendations for making regional anesthesia successful were to keep it

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Abstracts on Ambulatory Anesthesia Explore Care and Costs

By *Lucinda Everett, M.D.*
Seattle, Washington
Associate Professor of Anesthesiology
University of Washington
Seattle, Washington

Abstracts from the ambulatory anesthesia sessions at the recent Annual Meeting of the American Society of Anesthesiologists (ASA) in San Francisco, California, addressed several interesting themes. Abstract numbers are specified in brackets (e.g., [A-14]).

Several authors looked at cost-effectiveness issues in preoperative evaluation and utilization of ambulatory services. The Cleveland Clinic has been a leader in the use of computerized patient assessment, taking advantage of its extensive computer network to put a patient questionnaire into the surgeons' offices, allowing "triage" of preoperative patients either to visit the preoperative anesthesia clinic (PACE) or to bypass the clinic based on their health status and planned procedure. **Raymond G. Borkowski, M.D.**, Cleveland, Ohio, and colleagues estimated that their ability to bypass the PACE clinic saved additional staffing needs that would have translated into a dollar amount of approximately \$500,000 for a total surgical caseload of 63,000 patients [A-39].

In a separate study, investigators from St. Vincent's Hospital in New York compared tests ordered by anesthesiologists with those ordered by referral physicians and found that anesthesiologists ordered fewer tests at a savings of approximately \$50 per patient [A-40]. Author **Donald Mathews, M.D.**, postulates that the potential cost savings may increase as testing guidelines are refined; a recent large-scale evaluation of cataract patients showed that preoperative laboratory testing did not add to clinical care if the patient's status is stable.¹

A third study of utilization of perioperative services compared "anesthesia preparation time" and recovery length-of-stay times for surgical outpatients before and after the institu-

tion had a dedicated ambulatory surgical unit [A-46]. Without any specific protocols for outpatient anesthesia or recovery, **Peter J. Mollenholt, M.D.**, Portland, Oregon, reported that there was a significant increase in the proportion of cases having anesthesia preparation time of < 15 minutes, and length of stay in the recovery room shifted significantly toward observation times of less than one hour. It is assumed that these improvements resulted from increased awareness of the ambulatory status of the patient and/or improvement in physical plant or personnel utilization in the dedicated facility. The authors postulate that further efficiency could be achieved through the introduction of ambulatory practice guidelines.

A number of abstracts also addressed recovery issues and anesthetic techniques. **Nitin K. Shah, M.D.**, and colleagues from the University of California at Irvine reported postanesthesia care unit length of stay by anesthetic technique [A-45]. Similar to the findings of Pavlin in her large series analyzing outpatient discharge, this group had a high percentage of delayed discharge (> 120 min) in patients having spinal anesthesia (60 percent of patients); intermediate incidence with general, epidural or other regional (20-30 percent); and a very low incidence (6 percent) in patients having monitored anesthesia care.² This was a retrospective, observational study; discussion centered on the influence of specific anesthetic techniques such as choice of agent for spinal anesthesia.

An abstract from **Michael F. Mulroy, M.D.**, and colleagues at Virginia Mason Medical Center, Seattle, Washington, prospectively compared three controlled anesthetic techniques: 1) general anesthesia with propofol/nitrous oxide, 2) epidural anesthesia with 2-chloroprocaine or 3) spinal anesthesia with procaine and fentanyl [A-14]. The discharge times for epidural and general anesthesia groups were comparable (average 92 versus 104 minutes), while the pa-



Lucinda Everett, M.D.

tients having spinal anesthesia had a longer recovery time (average 146 minutes) and more frequent pruritis. The published results from this study note that the spinal patients were required to void prior to discharge and that this may have impacted on the recovery time.³

In a related abstract, the group from Virginia Mason evaluated necessity for voiding after a short-acting spinal or epidural anesthetic [A-42]. The use of bladder ultrasound allowed them to perform further risk assessment in patients who had not voided when they met all other discharge criteria; patients who had high bladder volumes and were unable to void were catheterized. Using this protocol, only three of 217 patients required catheterization following spinal or epidural anesthesia, and no patient required treatment for urinary retention after discharge home.

Researchers at the Toronto Western Hospital are using a computerized force platform to assess balance function after anesthesia. This is primarily a research tool that provides a sensitive and objective assessment of balance components and performance. The postanesthesia discharge score (PADS) is a clinical scale that assesses readiness for discharge based on clinical criteria (vital signs, ambulation/mental status, nausea/vomiting, pain

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Poster Discussions Offer Answers, Pose Challenging Questions

By Raymond G. Borkowski, M.D.

and

Brian M. Parker, M.D.

Department of Anesthesiology
The Cleveland Clinic Foundation
Cleveland, Ohio

At the recent American Society of Anesthesiologists (ASA) Annual Meeting in San Francisco, California, three poster discussion sessions were dedicated to ambulatory anesthesia. One session was comprised solely of posters dealing with postoperative nausea and vomiting (PONV), while another was dedicated to preoperative and postoperative issues. The largest session dealt with the use of various anesthetics and techniques in the outpatient setting. Abstract numbers are specified in brackets (e.g., [A-20]).

One of the major problems encountered in ambulatory anesthesia is PONV. Not only does it delay discharge of the patient, it also contributes to an overall unpleasant experience. This problem was addressed in the first session. The use of oral ondansetron was shown by Gan et al. [A-34] to reduce the incidence of postdischarge emesis with a high degree of patient satisfaction. In those surgeries associated with a high incidence of nausea and emesis such as laparoscopic surgery, oral ondansetron may be helpful in treating recurrent episodes once the patient has been discharged home.

Another interesting study compared the use of preoperative intravenous dexamethasone to ondansetron in patients undergoing laparoscopic cholecystectomy [A-32]. The results showed that both drugs were effective in reducing PONV. However, 0.15 mg/kg of dexamethasone was associated with a better antiemetic effect than 0.1 mg/kg of ondansetron as indicated by the number of rescue doses of metoclopramide required 24 hours after surgery. Further studies looking at the effectiveness of

these drugs by themselves and in combination are indicated based on these results. Decreased time to discharge and improved overall patient satisfaction was the conclusion of a study by Coloma et al. [A-38] in which an aggressive multimodal regimen was used in patients undergoing inguinal hernia repair. Patients receiving a combination of ondansetron, droperidol and ketorolac reported less pain and nausea both in the recovery area and at home when compared to the control group. The other advantage of this regimen is an increase in the fast-tracking percentage from 4 percent to 56 percent.

Two studies from Duke University in the second session helped to highlight the use of regional anesthesia for ambulatory surgery. The first study [A-9] demonstrated the use of continuous peripheral nerve blocks with a "Contiplex" system for surgical anesthesia and postoperative analgesia. Although five upper and lower extremity approaches were noted in the abstract, these were not detailed nor the local anesthetic used. The study does show, however, that this is an excellent technique for outpatient surgery with few side effects.

The second study [A-15] was noted to be the preliminary report of a current clinical study evaluating the advantages of a continuous interscalene brachial plexus catheter following outpatient rotator cuff surgery. Ropivacaine 0.2 percent at 10 to 12 ml/hr was infused for three days postoperatively with excellent pain relief, minimal breakthrough opioid use and minimal side effects. Similar studies in the future may help to promote this technique as a safe and effective means of postoperative pain control for the home-going patient and increase the complexity of procedures performed in ambulatory surgical centers.

In addition to these, a study presented in the third session [A-43] again highlighted the advantages of regional anesthesia for postoperative analgesia. It was shown that the use of a femoral

nerve block following outpatient anterior cruciate ligament repair was associated with decreased pain scores and therefore required less oral analgesics postoperatively.

Preoperative evaluation was another area which, based on the results of the studies presented, may lead to a change in the routine of the preoperative process. The questions of which preoperative tests are required for surgery and who is ultimately responsible for ordering them was studied in "A Survey of Preoperative Testing Requirements" from the Department of Anesthesiology at the Albany Medical College [A-23]. With the use of a questionnaire mailed to major medical centers, it was determined that 15 percent of surveyed institutions require at least one test on all patients. Forty-two percent required a hematocrit. An electrocardiogram (16 percent), complete blood cell count (16 percent), prothrombin time/partial thromboplastin time (5 percent) and electrolytes (5 percent) were the other single tests frequently ordered. Eighty-five percent of responding institutions used findings in the history and physical to determine which preoperative studies were indicated. A majority of these tests were ordered by anesthesiologists (61 percent) or in conjunction with the surgeon (34 percent). Only 5 percent of the time was the surgeon identified solely as ordering the preoperative studies. Further studies are needed to correlate studies ordered with anesthetic and surgical outcomes. These studies also appear to indicate that the title of "perioperative physician" may be more appropriate for anesthesiologists than originally thought.

Based on the work by Moss et al. [A-13], the information obtained in the preoperative history with regard to life-threatening allergic reactions to anesthetics appears to be overstated. Opioids and local anesthetics were the most common allergies stated by those patients who reported life-threatening reactions to anesthetics. In contrast, re-

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Poster Discussions Offer Answers, Pose Challenging Questions

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view of the published literature indicates allergic reactions to muscle relaxants and latex to be most common. These were only reported by a small percentage (7.4 percent) of patients during the preoperative assessment. Those involved with preoperative evaluation of patients may want to specifically ask patients about latex and muscle relaxant reactions, as many patients appear to be unaware of these reactions. A study by Olson [A-16] showed that in same-day ASA 1 and 2 surgical patients, abnormal preoperative hemoglobin was not associated with a change in the perioperative

management of the patient. This information may lead one to reconsider the use or need of a preoperative hemoglobin in otherwise healthy patients in the ambulatory surgical setting.

Since the development of bisulfite-containing propofol, questions have been posed in regards to its safety and effectiveness when compared to propofol. A poster presented by Shao et al. [A19] showed that the bisulfite-containing propofol was noted to have less pain on injection in addition to being associated with less PONV during the first 24 hours. In comparison, propofol was associated with a slightly greater decrease in blood pressure during induction. The time for induction,

awakening, time to discharge and changes in the bispectral index were not statistically significant. Whether these differences are felt to be significant enough to lead to a change in the anesthesia formulary will need to be decided by individual institutions.

The above summary of some of the posters presented at the ASA Annual Meeting this year show that there are many areas in ambulatory anesthesia that need to be investigated further. By making the anesthetic process safer, tailoring it to allow rapid discharge and providing prolonged analgesia, more procedures in the future may be done on an ambulatory basis. [Suresh](#)

Abstracts on Ambulatory Anesthesia Explore Care and Costs

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and surgical bleeding).⁴ These investigators found that patients who are considered discharge-ready according to the PADS score may still have impaired balance function when measured by this sensitive technique; the impairment was greater with propofol than with desflurane. The abnormal balance testing was noted at the time patients reached a PADS score of 9 (58-62 minutes after operation) but had re-

turned to baseline values by the actual time of discharge (110-112 minutes). Investigators commented that this is a sensitive research tool and should not be interpreted as invalidating the PADS score as a useful clinical discharge index.

References:

1. Schein OD, et al. The value of routine preoperative medical testing before cataract surgery. *N Engl J Med.* 2000; 342:168-175.

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3. Mulroy MF, et al. A comparison of spinal, epidural, and general anesthesia for outpatient knee arthroscopy. *Anesth Analg.* 2000; 91:860-864.

4. Chung F, et al. A post-anesthetic discharge scoring system for home readiness after ambulatory surgery. *J Clin Anesth.* 1995; 7:500-506. [Suresh](#)

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AHRQ Offers Insightful Report on Cataract Surgery

By Lee A. Fleisher, M.D.
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The Agency for Healthcare Research and Quality (AHRQ) recently released a report prepared by my group at Johns Hopkins on anesthesia management during cardiac surgery. AHRQ is a federally funded agency of the Public Health Service that focuses on policy-related issues. It has previously selected and established a series of evidence-based practice centers (EPCs), one of which is housed at The Johns Hopkins University. Professional societies or government agencies can propose questions to these EPCs, and AHRQ will fund the systematic review of the literature on the accepted topics.

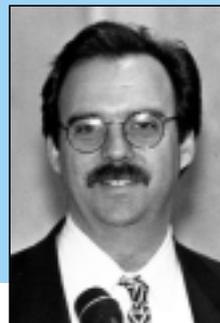
The American Academy of Ophthalmology proposed an evidence report on anesthetic management for cataract surgery that was subsequently assigned to our group. In collabora-

tion with the Academy and other interested organizations, including representatives from SAMBA, a series of pertinent research questions were developed. The primary analysis included a review of the literature from 1966 to the present and included both randomized clinical trials and large prospective cohort studies. A total of 141 articles were reviewed. Evidence was solicited regarding differences in control of ocular movement, pain during administration of the block and pain controlled during cardiac surgery with respect to specific techniques and agents used without any dominant effect demonstrated.

There is insufficient evidence to comment on medical complications since they appear to be extremely rare in the literature and not systematically reviewed. There is only weak evidence to suggest that intravenous or intramuscular sedation and analgesia is associated with better anxiety control, pain relief and patient satisfaction than a lack of such sedation or analgesia, primarily because of the absence of well-designed trials. Clearly, this is an area that requires further research using well-controlled, randomized clinical trials.

Also, a series of three supplemental analyses were performed. Based upon some of my own work using Medicare claims data, we observed that the risk of readmission within one week of surgery was greater for patients with procedures performed in office-based settings than ambulatory surgery or outpatient hospital settings. An analysis of the 19,250 surgeries from the Study of Medical Testing for Cataract Surgery, which was recently published in the *New England Journal of Medicine*, indicated a high level of satisfaction with anesthesia management regardless of strategy, greater intraoperative pain with topical rather than with injection anesthesia, and a greater rate of postoperative drowsiness and nausea when intravenous agents were used.

Finally, a decision analysis to theoretically evaluate the optimal management strategy was proposed. In brief,



Lee A. Fleisher, M.D.

15 medical experts were queried regarding the preference for different strategies such as retrobulbar or peribulbar block or topical anesthesia. In addition, they were asked whether they preferred to have an anesthesiologist present or on-call (able to respond to emergencies) to provide intravenous sedation or to have no anesthesiologist present. As expected, the strategy employing an anesthesiologist was associated with the greatest cost, but the medical experts felt that this strategy, which also employed retrobulbar anesthesia and intravenous sedation, was the most preferred.

We believe that patients must be assessed to determine their own preferences for having an anesthesiologist present in order to know the validity of such work. Future research should include an assessment of the value of different strategies of anesthetic management, both from the patient preference and outcome standpoint. This final aspect of the report was preliminary and hopefully will foster further thought on the optimal care of the patient undergoing cataract surgery, including the potential identification of subsets of patients for whom anesthesiologists would have great value and also circumstances in which anesthesiologists' services may not be beneficial (e.g., ultrashort cataracts under topical anesthesia). Further information on the report can be found at the AHRQ Web site <www.AHRQ.gov>.

Be a Part of the Trend – Join SAMBA

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Factors on the Rate of Complications and Readmissions After Outpatient Surgery” for which he received a \$100,000 outcomes research grant from SAMBA.

The SAMBA 16th Annual Meeting will be held on May 3-6, 2001, at the Esmeralda Resort in Indian Wells (Palm Springs), California. Detailed information and the preliminary program of this meeting are included in this issue. I look forward to seeing you in Palm Springs! Finally, I wish you all a happy and prosperous 2001. 

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Call for Electronic Submission of Abstracts and Residents' Travel Awards

The Committee on Annual Meeting has issued a call for the electronic submission of abstracts for the SAMBA 16th Annual Meeting to be held at the Renaissance Esmeralda Resort in Indian Wells (Palm Springs), California, on May 3-6, 2001.

The Society encourages residents in anesthesiology training programs to become involved in SAMBA. To this end, the Society will issue a limited number of travel awards to anesthesiology residents whose scientific abstracts are accepted for poster presentation at the SAMBA 2001 Annual Meeting.

These travel awards will support residents in training with a grant of \$1,000 each to attend the meeting. Those who receive travel grants for

their abstracts will remain eligible for cash awards presented by the Ambulatory Anesthesia Research Foundation. Case reports are not acceptable. Papers presented at the SAMBA Annual Meeting are eligible

for presentation at subsequent large anesthesia meetings such as the annual meetings of the American Society of Anesthesiologists and the

International Anesthesia Research Society.

The Society will once again be accepting only those abstracts that are submitted over the Internet through the SAMBA Web site. Visit the SAMBA Web site at <www.sambahq.org> for complete instructions. Also check the Web site to register online for the meeting. SAMBA

**For detailed information on
submission of abstracts,
visit:
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Breakfast Panel Dishes Up Hot Topic: Regional Anesthesia

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simple, safe, well-organized and efficient. He described his experience with spinal anesthetics in children, with minimal intraoperative cardiovascular changes and few PACU complications. Dr. Williams stated that no sedation is necessary for these children if they receive adequate attention in the O.R. Thus, the ex-preemie at risk for apnea may be discharged to home since narcotics and sedation are avoided.

Dr. Williams also discussed caudal

blocks. He administers this block immediately after induction and intravenous placement. He supplements it with rectal acetaminophen and oral ibuprofen 8 mg/kg every eight hours. He commented that peripheral nerve blocks are underutilized in pediatric patients. He specifically cited the advantage of axillary blocks for placement of percutaneous intravenous catheter lines, where the resultant vasodilation facilitates location of the vein and passage of the catheter. SAMBA