



Society for Ambulatory Anesthesia

# Ambulatory Anesthesia<sup>SM</sup>

## PRESIDENT'S MESSAGE

### Through the Looking Glass: A Look Back at a Year of Growth

By Rebecca S. Twersky, M.D.  
SAMBA President  
Brooklyn, New York

**S**top! Do not read this. Do not proceed any further. Why, you may ask, am I instructing you not to read this, my last President's Message? It is only because I would like you to view this message on the SAMBA Web site instead! I would not mind if you were to put this newsletter down, go over to your computer and log on to <www.sambahq.org>. You would be thoroughly impressed with the developments that have taken place these past 12 months on the SAMBA Web site. Amazingly, you may actually be able to view our Annual Meeting in Seattle and listen to audioclips of keynote speakers. The most recent addition to the Web site has been the Patient Information Area. This fascinating feature definitely places us one giant step ahead of any of the other anesthesia sites. In particular, we are the only anesthesia Web site of all the national societies to feature a patient information area. Additionally, the SAMBA Web site is the only one that gives the user the option to actually send questions about anesthesia to physicians. What better patient advocacy than that?!

Over the course of the year, several of you have corresponded with me expressing a desire for SAMBA to become more involved politically regard-

ing reimbursement issues, regulatory efforts for surgicenters and offices and patient advocacy. The best politicking can come from public awareness and education about what our organization has to offer. Special kudos go to J. Lance Lichter, M.D., Editor of the Newsletter and our Webmaster, who, together with the Committee on Communications, has totally transformed SAMBA's visibility on the Internet. Go ahead, take a break from reading this and press some buttons. Do you know that by the beginning of this year the Web site had received over 10,000 hits, including nearly 1,000 inquiries on the Patient Information Page? An amazing number which makes one take pride in what has been developed. I view the expansion of our Web site as one of our organization's major accomplishments this year. You as members were able to register for the SAMBA Annual Meeting, the Mid-Year Meeting and pay your SAMBA dues on-line. The scheduled Internet discussion groups, hosted by the Education and Clinical Care Committees, will expand in scope-only with your involvement.

If I were forced to pinpoint what I thought were the highlights of my term as president, I would have to admit that it was the opportunity for me to learn that the strength of SAMBA comes from its constituents. In my inaugural message, I defined a wise person as one who can objectively learn from others. The Board of Directors, whose size through reorganization was decreased by 10 members this year, pulled together as a team to serve in



Rebecca S. Twersky, M.D.

their new capacity as advisors to the committee chairs. The Past Presidents Council provided guidance, and consensus was achieved that allowed the Board to set the priorities for the organization. This strategic plan will be reviewed regularly and will steer the course of the Society for several years. My thanks to the committee chairs, some who were new and sought guidance and some who were seasoned and guided me, for completing their requisite tasks for the year. I would also like to acknowledge you the membership, for having become more involved in the organization than you ever have.

As one who perpetually makes lists and takes pride in checking off the completed tasks, permit me to share with you the "List for 1998-99" and where we are today, thanks to the devoted volunteerism of SAMBA leaders and members.

*International Activities: SAMBA par-*  
*Continued on Page 3*

Production problems at the printer and ASA caused this issue to be delayed. We apologize that you are receiving this issue late.

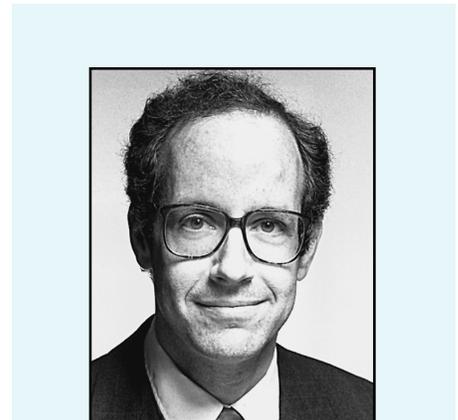
## Keeping Up With the Pace

Soon we will meet for the 14th annual meeting of our Society. Our Web site had the meeting brochure and the availability to sign up online three weeks before the brochures were actually mailed. At the time the brochures were mailed, we had 32 registrants for the meeting and 19 for the ACLS course. This is quite an increase in online registrations compared to last year's meeting. In addition to the SAMBA meeting, there is another meeting that might be of interest to our membership. Beginning on November 2, 1999, the XXV CLASA meeting will take place in the Dominican Republic. On the first day of this meeting (November 2, 1999), there is a satellite symposium titled, "Anesthesia for ambulatory and office based surgery for the new millennium." Several members from our Society have been invited to lecture for this meeting.

As you may recall, I reported on my metatarsal fracture in the last issue of this newsletter. I was not able to run for several weeks, so there was no interference with any marathon during the ASA meeting in Orlando. I did return to Orlando in January to run in the Walt Disney World Marathon. As an aside, it's rather strange to run through, instead of wait in line at, different areas of the park. In this issue, we return

to Orlando and publish three more summaries from discussions relating to ambulatory anesthesia held during ASA's last meeting in Orlando. Girish P. Joshi, M.D., reports on the ideal anesthetic technique for ambulatory minimally invasive surgery, based on a panel discussion. He also summarizes a lecture given by Paul F. White, M.D., Ph.D., on new ambulatory anesthesia techniques. Doris K. Tong, M.D., reports on a poster discussion on ambulatory anesthesia held during the annual meeting. Mary Ann Vann, M.D., has presented some ideas of how medical ethics relate to ambulatory anesthesia. The book by Michael F. Roizen, M.D., *RealAge: Are You As Young As You Can Be?* was published in February by Cliff Street Books. We are fortunate to have another installment of his ideas from his book. Finally, we continue with our book review column.

Although I am saddened by the fact that this is the last issue that I will serve as editor of this newsletter, I am pleased that I will be allowed to continue as the Webmaster for the Society. I have been especially pleased with the input to the newsletter from members of the Society. I know that the newsletter will continue to be an asset for the Society based on the leadership of my current vice-chair, Walter G. Maurer, M.D.,



J. Lance Lichtor, M.D.

who, after this issue, will serve as newsletter editor. I have mentioned this in every editor's column I have written — the newsletter cannot be published without the help of the members of the publications committee and Denise M. Jones and Gary W. Hoormann from the ASA office.

J. Lance Lichtor, M.D.  
Editor

*SAMBA*

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# PRESIDENT'S MESSAGE

*Continued from page 1*

ticipated in the 2nd International Ambulatory Surgery Conference in Palma de Mallorca, Spain, this past June 1998 and was fortunate to be part of the ceremonies that launched the Spanish edition of *Anesthesia and Analgesia*, the official journal of SAMBA. I participated in the 1998 Day Surgery Conference of Australasia in Sydney, Australia in November, while Beverly K. Philip, M.D., and Raafat S. Hanallah, M.D., represented SAMBA at the 3rd International Association of Ambulatory Surgery (IAAS) International Congress just held in Italy in April. Plans are underway for SAMBA to co-host with FASA (Federated Ambulatory Surgery Association) the 4th International Congress IAAS meeting in 2003. How do we measure the success of SAMBA's international influence? By the increase in our international members (this year alone the Society experienced a 55 percent growth) and the inquiries we have received on our Web site, serving as an international network of information exchange with our SAMBA colleagues.

*Clinical Care Committees:* The Committee on Office-Based Anesthesia, chaired by Marc E. Koch, M.D., in conjunction with ASA, successfully submitted to the ASA House of Delegates Guidelines for Ambulatory Anesthesia and Surgery, approved October 1998. The committee has developed a library for office-based anesthesia materials and will be publishing a review article and, together with ASA, a publication on Recommendations for Office-Based Practice. How do we measure our success? SAMBA continually receives inquiries from the public and professional communities regarding practices in offices, surgicenters and preoperative clinics. We are recognized by ASA as *the* subspecialty society with the expertise and knowledge in this growing field. The Committee on Perioperative Management, chaired by Angela M. Bader, M.D., has conducted a national survey to determine the scope of practice for preoperative evaluation and will be working with her committee to further define best

practices. The Committee on Practice Management, chaired by Lucinda L. Everett, M.D., hosted Web site discussions on various topics for the 1st quarter of 1999 and is developing a survey to assess extended recovery care services.

*Educational Programs:* The Society's three major educational programs this year deserve special recognition. Paul F. White, M.D., Ph.D., chair of the 1998 Annual Meeting in Scottsdale, Arizona, and this year in Seattle, Washington, along with his committee developed an exciting and innovative program with refreshing new faces and topics. Barbara S. Gold, M.D., and her Committee on the Mid Year Meeting in October presented "Anesthesia Practice Management." The results of the meeting were so successful that we will be holding our third Mid Year Meeting in October 1999 in Dallas, Texas, chaired by Melinda L. Mingus, M.D. The SAMBA Breakfast Panel on "Monitored Anesthesia Care: The New Horizon" at the 1998 ASA Annual Meeting, chaired by Frances Chung, M.D., hosted a sold-out crowd. Special recognition is directed to Dr. Chung, who has devoted a significant amount of time this year to organizing the program for the upcoming Satellite Meeting immediately preceding the 2000 World Congress of Anesthesiologists in Montreal, Canada. SAMBA is currently coordinating with FASA the opportunity for members of our organization and theirs to attend each other's Annual Meetings in May 2000, which will both be held in Washington, D.C.

The Committee on Membership chaired by Janet Pavlin, M.D., in conjunction with the Committee on Communications, has submitted a proposal to increase and retain domestic and international members that will keep SAMBA strong for the future. The dues are still the most affordable with a luxury list of benefits. Our active membership continues to increase. Residents have the opportunity to serve on SAMBA committees and to participate in special resident-oriented programs,

such as the Resident Forum presented during the 1999 Annual Meeting.

*Research:* You should be aware by now that SAMBA has launched a request for proposal to fund a major outcome study affecting the practice of ambulatory anesthesia and surgery. This will be awarded in 2000 and should be the catalyst for continued research and publications in our specialty. Thanks to Patricia A. Kapur, M.D., and her Committee on Research for spearheading this project.

There are several extraordinary individuals that deserve acknowledgment. My special relationships with Bernard V. Wetchler, M.D., Burton S. Epstein, M.D., Surinder K. Kallar, M.D., and Beverly K. Philip, M.D., go beyond the mentoring and support they provided me with, that allowed me to serve as your president. Gary W. Hoormann, our Special Services Manager should be cloned and distributed to every organization and department. His professionalism and service is invaluable to SAMBA. Last but certainly not least, to my husband David and my children: Baila, Yitzy and Naomi, who associated my year as SAMBA president with this quotation from E.B. White:

*"I arise in the morning torn between the desire to improve the world and a desire to enjoy the world. This makes it hard to plan the day."*

They understood my sincere desire to devote my energies to SAMBA and were very understanding as the demands of the presidency this year took precious time away from them.

My term as President has drawn to a close, but my devotion, dedication and participation in SAMBA will continue. I would like to express my appreciation to you, the members, for having the faith and confidence to have elected me as your President. It is an honor I will always cherish and an experience I will long remember. SAMBA

# Ideal Anesthetic Technique for Ambulatory Minimally Invasive Surgery

Reported by Girish P. Joshi, M.D.  
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The American Society of Anesthesiologists (ASA) Annual Meeting Reports I and II, on patient recovery/discharge and office-based anesthesia, were published in the January 1999 issue of *Ambulatory Anesthesia*.

The following was presented by the Panel on Anesthetic Implications of Minimally Invasive Surgery, ASA Annual Meeting, October 20, 1998.

In recent years, the basis of medical practice has been changing from the traditional opinion-based decision-making to evidence-based decision-making. Concerns regarding soaring health costs, however, have increased emphasis on cost-containment. Cost-containment has led to the introduction of the concept of value-based practice. Therefore, it is necessary that our choices of anesthesia techniques conform to the generally accepted value-based practice.

An ideal anesthetic technique should provide for rapid and smooth induction of anesthesia, adequate intraoperative amnesia and analgesia, good surgical conditions and rapid recovery with minimal or no side effects. One of the important factors, which is generally overlooked, is the occurrence of complications after the patient is discharged home. In addition to early emergence from anesthesia and early discharge, an ideal anesthetic technique would also provide for an early return to daily activities. Thus, an ideal anesthetic technique would provide the best outcome at the most reasonable cost.

The availability of newer sedative-hypnotics (e.g., propofol), inhaled anesthetics (e.g., desflurane, sevoflurane), analgesics (e.g., remifentanyl) and muscle relaxants (e.g., mivacurium, rapacuronium) that provide for

faster onset, easier titration and more rapid recovery than other drugs have facilitated the practice of ambulatory anesthesia. In addition, the availability of the bispectral (BIS) monitor allows precise titration of anesthetic drugs and provides consistency of anesthetic delivery. The BIS index is derived from the electroencephalograph (EEG) and has been shown to be a quantifiable measure of the sedative and hypnotic effects of anesthetic drugs. It is a dimensionless number from zero to 100 with decreasing values indicating more sedation and hypnosis. Numerous studies have shown that a BIS value of less than 60 is associated with a low probability of recall and a high probability of unresponsiveness during surgery.

Song et al.<sup>1</sup> evaluated BIS monitoring during an inhalational anesthetic in outpatients undergoing laparoscopic tubal ligation. Compared with standard practice (i.e., administration of inhaled anesthetics according to hemodynamic variables and clinical observation), the titration of desflurane or sevoflurane to maintain a BIS index value of 60 decreased the amount of inhaled anesthetic drug used during the maintenance period and resulted in shorter emergence times. Similar to the findings with inhaled anesthetics, the use of BIS monitoring during total intravenous anesthetic technique with propofol-alfentanil-nitrous oxide resulted in reduced requirements of propofol infusion and faster emergence from anesthesia.<sup>2</sup> In addition, BIS monitoring decreased the length of the postanesthesia care unit (PACU) stay.

Previous studies have reported that laparoscopic surgical procedures are associated with increased mean arterial blood pressure. This increase in arterial blood pressure is usually treated by increasing the concentrations of anesthetic drugs. The BIS monitor may help to discriminate inadequate anesthesia from the hemodynamic effects of pneumoperitoneum and thereby contribute to a more judicious therapeutic choice. Titration of the hypnotic drugs according to the



Girish P. Joshi, M.D.

BIS index value and administration of ultrashort-acting opioids (e.g., remifentanyl) or adjunctive drugs (e.g., beta-blockers, adenosine) that reduce anesthetic and analgesic requirements may be more appropriate.

The newer anesthetic drugs are more costly; however, early recovery from anesthesia should enable patients to meet discharge criteria and allow us to "fast-track" outpatients (e.g., bypass PACU before discharge home) resulting in cost savings. The major limitation to the fast-track process is our ability to control postoperative pain and postoperative nausea and vomiting (PONV).<sup>3</sup> In addition to achieving a rapid emergence from anesthesia, it is also necessary to provide adequate postoperative pain relief and prevent PONV.

It is generally believed that minimally invasive surgical procedures are associated with decreased postoperative pain and/or analgesic requirements. However, these procedures can still result in considerable discomfort, thereby delaying return to normal activities. Although the potential benefits of local anesthetic techniques have been recognized for a long time, these techniques are often neglected.<sup>4</sup> Wound infiltration and peripheral nerve blocks can provide effective analgesia in the intra- and postoperative periods. They are simple techniques with a high success rate and a low

incidence of complications. When used as adjuvants to general anesthesia, these techniques decrease the intraoperative anesthetic and analgesic requirements and provide for a rapid and smooth recovery.

Instillation of local anesthetics around the operative area has also been shown to provide long-lasting analgesia, reduce postoperative analgesic requirements and facilitate early mobilization. Pasqualucci et al.<sup>5</sup> found that the instillation of bupivacaine 0.5 percent, 20 ml in the right hepatodiaphragmatic region and on the gall bladder area provided effective postoperative pain relief in patients undergoing laparoscopic cholecystectomy. In addition, administration of the local anesthetic before surgery was superior to administration of the local anesthetic after surgery, suggesting a possible pre-emptive analgesic effect.

The effectiveness of an individual analgesic may be enhanced by the additive or synergistic effects of multiple analgesic drugs with different mechanisms of analgesia. This "multimodal" analgesia technique, which combines analgesic regimens, including opioids, nonsteroidal anti-inflammatory drugs (NSAIDs) and local anesthetics, provides effective analgesia in the perioperative period. The parenteral NSAIDs such as ketorolac are valuable adjuvants as they reduce opioid requirements in the perioperative period and decrease opioid-related side effects. In addition, NSAIDs may decrease the risk of breakthrough pain because of their long duration of action.

Michaloliakou et al.<sup>6</sup> evaluated the effects of multimodal analgesia technique in patients undergoing laparoscopic cholecystectomy. The use of a multimodal analgesia technique, including premedication with meperidine and ketorolac and administration of bupivacaine at the portal sites, was highly efficacious in relieving postoperative pain. In addition, this technique reduced the incidence of nausea, allowed earlier discharge from the PACU and the hospital, and reduced the need

for hospital admission. An analgesic technique should not only lower pain scores but should also facilitate earlier mobilization and reduce perioperative complications.

Patients undergoing laparoscopic surgery are at risk for PONV, which may contribute to delayed recovery and discharge. A recent multicenter study in more than 2,000 adults at high risk for PONV reported that prophylactic administration of antiemetics reduced the incidence of PONV and the need for antiemetic treatment and improved patient satisfaction.<sup>7</sup> Furthermore, droperidol 0.625 mg was as efficacious as ondansetron 4 mg. Similar to the concept of multimodal analgesia, it is suggested that a combination of antiemetics with different mechanisms of action would provide superior prophylaxis. McKenzie and colleagues<sup>8</sup> demonstrated that the combination of droperidol 1.25 mg and ondansetron 4 mg was superior to droperidol 1.25 mg alone in the prevention of PONV.

In conclusion, although there is no ideal anesthetic technique for ambulatory surgery, judicious titration of newer, shorter-acting anesthetic drugs using BIS monitoring can provide desired anesthetic and surgical conditions with rapid emergence. In addition, pre-emptive or aggressive analgesic and antiemetic therapy enables more outpatients to be discharged early. Finally, reduction in postoperative symptom distress also will allow patients to have an early return to normal daily activities and make patients' experience with their surgery more satisfying. Identification of a suitable (ideal) anesthetic technique for a particular surgical procedure and incorporating it in a clinical pathway should improve the overall outcome and decrease health costs.<sup>9</sup>

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## What Is New in Ambulatory Anesthesia Techniques?

Reported by Girish P. Joshi, M.D.  
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The American Society of Anesthesiologists (ASA) Annual Meeting Reports I and II, on patient recovery/discharge and office-based anesthesia, were published in the January 1999 issue of SAMBA's *Ambulatory Anesthesia*.

During the American Society of Anesthesiologists (ASA) Annual Meeting in October 1998, Paul F. White, M.D., Ph.D., Professor and McDermott Chair of Anesthesiology, Department of Anesthesiology and Pain Management, University of Texas Southwestern Medical Center at Dallas, Texas, spoke on "New Ambulatory Anesthesia Techniques."

Dr. White introduced the concept of fast-tracking in ambulatory anesthesia, which includes bypassing the postanesthesia care unit. He emphasized that due to the growth of minimally invasive surgical procedures and the numerous advantages associated with ambulatory surgery, an increasing number of surgical procedures are performed on an outpatient basis.

With respect to patient preparation, the newer, more liberal criteria for preoperative fasting were discussed. Permitting clear liquids up to two hours before surgery reduces anxiety and discomfort, dilutes gastric secretions and stimulates gastric emptying. Aggressive preoperative hydration has been shown to decrease postoperative drowsiness, dizziness, thirst, fatigue and nausea after ambulatory surgery. The administration of shorter-acting benzodiazepines provides reliable sedation, amnesia and axiolysis without clinically significant delay in recovery times or home-readiness after outpatient surgical procedures.

The choice of anesthetic technique on the recovery process was explored. The use of local and regional anes-

thetic techniques supplemented with sedation (i.e., monitored anesthesia care) remains popular because of improved recovery profile as the common side effects of general anesthesia are avoided. Dr. White recommended that midazolam 2 mg, iv, combined with propofol 25-75 µg/kg/min is ideal for providing sedation. In addition, administration of the shorter-acting opioid remifentanyl 0.05-0.15 µg/kg/min could provide a valuable adjuvant to the midazolam-propofol combination. The limiting factor to the more widespread use of spinal anesthesia in an outpatient setting is the delay in recovery from the residual sympathectomy (e.g., postural hypotension, inability to void) and residual motor blockade. However, use of low-dose lidocaine-fentanyl combinations may allow rapid recovery and make spinal anesthesia suitable for ambulatory surgical procedures.

The newer, shorter-acting anesthetic, analgesic and muscle relaxant drugs permit even longer and more complex surgical procedures to be performed on an outpatient basis. Propofol remains the induction agent of choice because of its rapid recovery profile and antiemetic properties. The newer inhaled anesthetics (e.g., desflurane, sevoflurane) have rapid onset and termination of clinical effects. When these newer anesthetics are combined with remifentanyl, emergence from anesthesia is extremely rapid. Dr. White emphasized, however, that opioids should be used sparingly, and intraoperative hemodynamic stability should be achieved by adjuvant drugs (e.g., beta-blockers, alpha-2 agonists, adenosine). Although tracheal intubation remains popular, the laryngeal mask airway (LMA) and the cuffed oropharyngeal airway (COPA) devices have advantages. The use of the LMA or the COPA avoids the need for muscle relaxants. In patients requiring muscle relaxants, the use of shorter-acting muscle relaxants should decrease the need for reversal drugs and thus the incidence of postoperative nausea and vomiting (PONV).

The need for adequate postoperative pain control was discussed. The key to adequate pain management is the use of multimodal analgesia techniques consisting of a combination of opioids, local anesthetics and nonsteroidal anti-inflammatory drugs. In addition, prophylactic administration of antiemetics was emphasized. The use of droperidol 0.625 mg is more cost-effective than is ondansetron 4 mg. It was recommended that ondansetron be administered toward the end of the surgery rather than after induction of anesthesia. In addition, in patients at high risk of PONV, the use of combinations of antiemetics with different mechanisms of action (e.g., droperidol, 5-HT<sub>3</sub> antagonists, dexamethasone) may be more effective than a single drug.

In summary, the recent pharmacological and technological advances in anesthesia and surgery allow outpatients with complex medical problems to undergo a wide variety of surgical procedures on an ambulatory basis. Adequate control of postoperative pain and nausea will enable early recovery and fast-tracking. The use of the novel multimodal approach to controlling postoperative pathophysiology and facilitating the rehabilitation process further enhances recovery after ambulatory surgery. Finally, Dr. White challenged the attendees at this refresher course to provide high-quality anesthesia care at a reduced cost with the efficient use of resources (including personnel, space, time, consumables and capital investments). SUMMARY

## Poster Discussion on Ambulatory Anesthesia

Reported by Doris K. Tong, M.D.

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(Numbers noted in brackets and boldfaced within this article indicate the abstract number of the paper and corresponds with the numbered abstracts printed in the September 1998 supplement of the journal *Anesthesiology*.)

The American Society of Anesthesiologists (ASA) organized a poster discussion on ambulatory anesthesia during its annual meeting on October 17-21, 1998, in Orlando, Florida. The session was moderated by Raafat S. Hannallah, M.D., Washington, D.C., and Kathryn E. McGoldrick, M.D., New Haven, Connecticut. Ian Smith, M.D., Staffordshire, United Kingdom, presented a randomized double-blind controlled trial comparing target controlled infusion (TCI) of propofol with sevoflurane, both for induction (tidal breathing method for sevoflurane) and maintenance, in 61 patients undergoing outpatient procedures [A-17]. Both agents were titrated according to clinical criteria. Induction was slower with sevoflurane but was associated with a lower incidence of apnea and an earlier emergence. However, sevoflurane led to delayed late recovery as a result of a higher incidence of nausea.

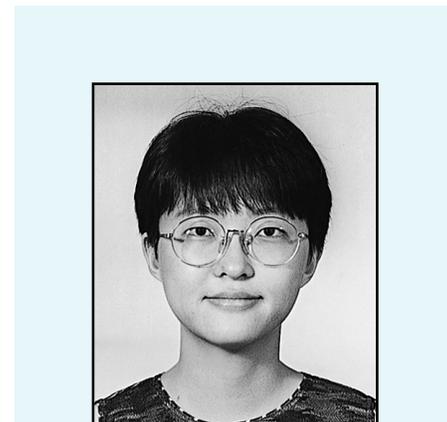
In a similar study comparing sevoflurane (vital capacity method) with propofol for induction and sevoflurane with isoflurane for maintenance in 27 patients undergoing outpatient procedures, Charles E. Smith, M.D., Cleveland, Ohio, also found that sevoflurane was associated with a lower incidence of apnea on induction and a trend to suggest a longer time to loss of consciousness [A-22]. However, sevoflurane did not lead to a faster emergence or immediate recovery. Also, sevoflurane was associated with a higher incidence of postoperative nausea and vomiting. Jun Tang, M.D., Dallas, Texas, found similar results

comparing propofol with sevoflurane for both induction and maintenance in an office-based setting [A-24]. In this study, esmolol was used as an adjunct for induction and the bispectral index was used for intraoperative titration.

Desflurane was investigated for anesthesia maintenance in pediatric anesthesia. Rudolf F. Hipp, M.D., Munich, Germany, compared desflurane with a historical control group given isoflurane for maintenance after intravenous thiopental induction [A-23]. Though the authors did not observe respiratory adverse events with the use of desflurane, the design of the study was flawed and the sample size (32 patients) was such that any conclusion on the safety of desflurane in pediatric anesthesia is still premature.

Thomas T. Nguyen, M.D., Rochester, New York, studied the effect of epidural saline injection on the duration of motor and sensory block in outpatients undergoing extracorporeal shock wave lithotripsy (ESWL) with epidural anesthesia [A-18]. Epidural anesthesia was established by 20 cc 2 percent lidocaine with epinephrine and 100 µg fentanyl. Sensory anesthesia was maintained at T6 by incremental lidocaine. After ESWL, 40 patients were randomly allocated to either 25 cc or 1 cc of epidural normal saline. The blinded recovery outcomes were assessed by a recovery room nurse. Time to resolution of motor block was shorter in the saline group. However, the time to 2-dermatome regression, time to ambulate and the duration of their postanesthesia care unit stay did not differ. Dr. McGoldrick suggested that a lower concentration of lidocaine without epinephrine may show a benefit in sensory recovery.

Doris K. Tong, M.D., Toronto, Ontario, Canada, conducted a multicenter, double-blind, randomized, controlled trial comparing 1 percent with 5 percent hyperbaric spinal lidocaine for the incidence and severity of transient neurological symptoms (TNS) in patients undergoing short urological procedures [A-19]. The spinal anesthesia techniques and intraop-



Doris K. Tong, M.D.

erative management were standardized. The patients were followed up with a standardized telephone questionnaire for the first three postoperative days. In an interim analysis with 184 patients, the incidence of TNS was about 20 percent in both groups. One percent lidocaine had a low drug failure rate, a comparable intraoperative profile and a faster recovery profile than 5 percent lidocaine. There was significant difference in the mean Visual Analogue Scale and the mean daily activity scores between the TNS versus non-TNS patients. However, the difference in the mean daily activity scores was not of clinical significance.

Alfred W. Doenicke, M.D., Munich, Germany, compared etomidate with propofol for both induction and maintenance in a randomized, double-blind, controlled manner in 20 patients undergoing short outpatient procedures [A-20]. The preliminary results showed that etomidate was associated with a greater hemodynamic stability with no adrenal suppression. The sample size, however, was too small to clarify the difference between etomidate and propofol on postoperative nausea and vomiting. The confidence interval for the incidence of nausea/vomiting for both groups ranged from 0 percent to 29 percent.

John D. Thurn, M.D., Chicago, Illinois, studied the safety of rapid vanco-

*Continued on page 9*

## Informed Consent in the Ambulatory Anesthesia Setting

By Mary Ann Vann, M.D.  
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Once the realm of intensivists addressing end-of-life issues, the principles of medical bioethics can guide ambulatory anesthesiologists in their daily practice. Respect for a patient's autonomy and thereby their rights to adequately informed consent, privacy and accommodation of their values or beliefs, cannot be neglected in the haste of the ambulatory surgery schedule.

This author's interest in medical ethics piqued while establishing policy at a new surgery center regarding patients' advance directives. Spirited discussions on the subject of acknowledging and executing the directives at this surgery center led to an invitation to join the affiliated hospital's Ethics Committee.

Even during a time-limited patient interview, the physician cognizant of the ethical issues will more readily recognize them and expeditiously respond to the patient's needs.

A basic right of all patients is informed consent. "From the fact that actions are never fully informed, voluntary or autonomous, it does not follow that they are never adequately informed, voluntary or autonomous."<sup>1</sup> The ethical guideline for disclosure is the subjective person standard.<sup>2</sup> This model implies that each patient requires a different amount of information based on his or her personal beliefs and medical history. It expects that the anesthesiologist will ascertain each patient's need for certain information. This may be more difficult to discern during a brief interview with a patient already on a stretcher, compared to a visit to a preoperative clinic. Informed consent must be voluntary and independent of influence.

One may consider whether a patient gowned and awaiting imminent surgery can make a fully voluntary and uninfluenced decision since they

have already taken time off work and arranged escorts and baby-sitters. For parents of children having day surgery, a study by Waisel and Truog showed "the decision to proceed with surgery appears to be a function of the desire for surgery itself and is not affected by external considerations such as the anesthesia preoperative discussion," but the decision was also swayed by the fact that many practical details of preparation had been accomplished.<sup>3</sup>

Therapeutic privilege is cited when caregivers withhold information from a patient when they think that this would be harmful to the patient in some way. Does this allow an anesthesiologist to avoid discussing the risk of serious injury or death with a nervous 20-year-old patient minutes away from a hernia operation? The physician should direct the discussion if the preoperative interview follows the subjective person standard. A study done in 1977 revealed that patients receiving more detailed information on anesthesia risks did not have significantly different anxiety levels at the time of surgery. However, these patients had their preoperative interview conducted the night preceding surgery, not immediately before.<sup>4</sup>

The anesthesiologist must also assess the patient's capacity to understand the information and make an independent decision. In a surgery center, consultations on competency may not be available. Surrogates or legal guardians should be provided with adequate information when the patient is unable to consent to prevent a "rubber stamp" type of approval for a procedure.

The "Patient's Bill of Rights" promotes a patient's autonomy through the rights of confidentiality and privacy. *Confidentiality* refers to the protection of the information provided by the patient to the caregivers, *privacy* concerns patients' rights to control who may obtain access to their lives. Respect for privacy should guide policy on the posting of schedules, preparing, labeling and storing of patients charts and obtaining medical history as well

as protecting their modesty. This is especially important in ambulatory facilities that allow caregivers and family greater access to patient care areas.

"The autonomous patient has the moral right to veto familial involvement."<sup>1</sup> The patient may not want family members present during a preoperative interview or details about them discussed with family during a preoperative telephone call. Unless granted permission to do so, a family member should not be asked to provide personal or medical information about the patient or be given instructions or details about the procedure.

In my personal experience, I have heard objections to the requirement for a "responsible escort" for discharge home after ambulatory anesthesia. Usually this escort is required to participate in discharge instructions and home care as well as accompany the patient to their residence. These patients felt that this violated their right to privacy, especially when they were concealing their surgery from co-workers or family, or were new in town and did not know anyone well enough to ask them to bear this responsibility. Perhaps a professional escort or home care service could substitute for the "responsible escort" in these circumstances.

As more patients with complicated pre-existing diseases present to ambulatory surgery facilities, there will be greater attention focused on the issues of do-not-resuscitate (DNR) orders and advance directives. The American Society of Anesthesiologists (ASA) has published "Ethical Guidelines for the Anesthesia Care of Patients with DNR Orders or Other Directives that Limit Treatment" for these special situations in addition to "Guidelines for the Ethical Practice of Anesthesiology" that address the daily practice of anesthesia.<sup>5</sup> *Advance directives* indicate the patient's wishes to accept or limit care; a *health care proxy* designates a person to make medical decisions when the patient is unable to do so. A process to establish the existence and content of these documents is a standard of the

Joint Commission on Accreditation of Healthcare Organizations.

When advance directives limit some aspects of care, a discussion on how to reconcile these wishes with the realities and limitations of ambulatory anesthesia should occur between the surgeon, anesthesiologist and patient. For example, a patient who prohibits specific procedures only when irreversible injury occurs must realize that the lack of diagnostic equipment and consultants at a surgery center could make this determination impossible. Thus, they would require full resuscitation and support and transfer to a hospital.

While regarding the spiritual beliefs and ethnic or moral values of the patient as paramount to an ethical practitioner, one must also consider the value system of the caregivers. A replacement may be necessary for an employee who has moral objections to caring for certain patients or performing specific procedures (e.g., Jehovah's Witness or therapeutic abortion). With limited staffing in ambulatory centers, it is helpful to know about these principles early to prevent last-minute delays.

Anesthesiologists practicing in the ambulatory setting are subject to extreme production pressures with the potential to affect their judgment. Ethical teaching requires that the "patient's interests take priority over others' interests."<sup>1</sup> However, many of us have been pressured to do cases regardless of NPO status, poorly managed comorbid conditions, abnormal ECGs, etc., so as not to lose business or anger patients or surgeons.

Ethical dilemmas, defined as two options with competing moral obligations or values, occur in the daily practice of ambulatory anesthesia. Practitioners who are aware of these concepts will recognize and handle the ethical situations as they arise. The environment of care will improve for patients and staff when they practice at a higher level of ethical awareness.

What ethical dilemmas have you faced in ambulatory anesthesia? Fu-

*Ethical dilemmas, defined as two options with competing moral obligations or values, occur in the daily practice of ambulatory anesthesia.*

*Practitioners who are aware of these concepts will recognize and handle the ethical situations as they arise.*

ture newsletters will discuss the ethical issues and implications of these cases.

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## ASA UPDATE

*Continued from page 7*

mycin infusion (1 gm over 10 min by volumetric pump) in 30 patients undergoing outpatient procedures [A-21]. This randomized, double-blind, controlled trial compared the rate of hypotension (BP > 20 percent change) and vancomycin discontinuation in groups pretreated with H1, H2 antihistamines or placebo. There was no hypotension episode and only one vancomycin discontinuation in the pretreated group. Though there was significant statistical difference between the pretreated and placebo groups, the question remains, "Even with pretreatment, is the practice of rapid vancomycin infusion safe enough for clinical use?" Even with no hypotension episodes in 20 patients, results still represent an upper 95 percent confidence limit of 14 percent. Thus, these data are inadequate to suggest a safe use of rapid vancomycin infusion even with pretreatment. SUMBA

### Discount Subscription to Ambulatory Surgery

Elsevier Science, publishers of *Ambulatory Surgery: The International Journal of Day Surgery*, is offering an opportunity to SAMBA members to subscribe to the journal at the special subscription price of \$58. The regular subscription price is \$261.

The journal is published quarterly in the United Kingdom and features peer-reviewed original articles relating to the practice of ambulatory surgery. Interested members can obtain more information by visiting the journal's Web site at <<http://www.elsevier.nl/locate/ambsur>> or by telephoning its U.S. office at (800) 437-4636. SUMBA

## What Do Studies of *Drosophila* and Antioxidants Have to Do With Your Rate of Aging?

By Michael F. Roizen, M.D.\*\*

Professor of Internal Medicine

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Chicago, Illinois

and

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Vice President

Research and Development

Real Age™, Inc.

(Much of the data presented is reviewed in Dr. Roizen's book, *Real Age: Are You As Young As You Can Be?*, Cliff Street/Harper Collins, now available in your local or online bookstore. In the book, Dr. Roizen reviews the information he presented at the SAMBA Annual Meeting, including the 44 steps you can take to make to make yourself younger, and the scientific foundations for those steps. Dr. Roizen has been a member of SAMBA since its inception.)

In the June 1998 issue of *Nature Genetics*, a scientific article from Canadian researchers highlighted the extension of the *Drosophila* (fruit fly) life span by overexpression of human SOD1 in motor neurons. What does this have to do with you?

What this article showed was that by extra expression, which means by increasing the production in the fruit fly of an antioxidant normally found (in humans), the fruit fly's life span was extended by about 40 percent. This meant that metabolizing reactive oxygen may be an important determinant in aging and life span determination. This confirmed work by Orr and Sohal published in *Science* in 1994 and in the archives of *Biochemistry* in 1993.<sup>1,2</sup> This work really stems from work done over 40 years ago by Denim Harman, who first developed the free radical and antioxidant theory of aging.<sup>3</sup>

### How can humans benefit from this work in fruit flies?

We consume antioxidants and also produce them all the time in our body,

and some of the best antioxidants we consume are found in fruits and vegetables and normal vitamins. One of the best is found in tomatoes. The lycopene, or antioxidant most prevalent in tomato, is not absorbed when you just have tomato juice, but is absorbed when you eat the tomatoes with a little fat, such as in a drip of olive oil, or even better in tomato paste. Further, taking vitamins C and E seems to make you younger too. Vitamin C and E combined are a great antioxidant pair, that is, Vitamin C is water soluble and Vitamin E is fat soluble, thus, working in both the water and fat soluble areas of your cells. Consuming food containing Vitamin C three times a day and getting 800mg of Vitamin C, spread out so that you get at least 400mg in any 12 hour period and consuming 400IU of Vitamin D, 400IU of Vitamin E, 800mcg of folate (folic acid) and 600mg of Vitamin B6 a day can make you RealAge\* 6 years younger.

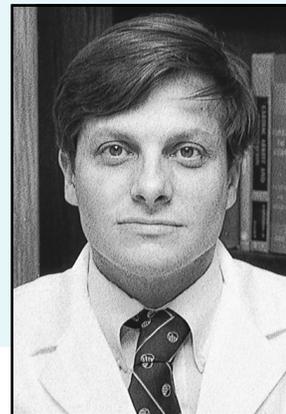
Further, adding 10 helpings of tomatoes or tomatoes with a little fat, or tomato paste a week for men makes their RealAge at least 0.5 years further younger due to its effect in reducing prostate cancer and may, if the data from the European Heart study (EURAMIC) are proved, make their age another 6 years younger.

These are dramatic benefits from just choosing your food choices and vitamins well. Pretty easy, eh? And thus, maybe the fruit fly who lands on fruit is after the antioxidants after all and not just after the energy value of those fruits. Maybe we should all be as smart as Mr. and Mrs. Fruit Fly and bite into the tomato and other fruit more often.

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\* Real Age is the equivalent of your physiologic age. The RealAge Program (<http://www.RealAge.com>) will help you calculate your Real Age and will account for the other factors.

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Michael F. Roizen, M.D.

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## BOOK REVIEWS

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### Near Misses in Pediatric Anesthesia

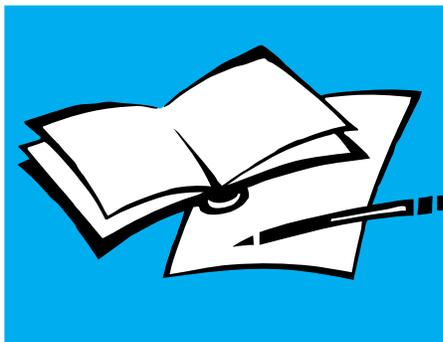
By John G. Brock-Utne, M.D., Ph.D. (Stanford University) Butterworth-Heinemann (1999) 47 chapters, 101 pages, \$35 softcover.

#### Doody's Notes:

Primary audience is anesthesiology residents. Secondary audience is pediatric anesthesiologists. The book contains black-and-white illustrations.

*Reviewed by Catherine R. Bachman, M.D., University of Chicago Pritzker School of Medicine, Chicago, Illinois.*

**Description:** This book is comprised of 47 case presentations of "near misses" or problems arising in clinical pediatric anesthesia drawn mostly from the author's own experience. Each case is presented, and the actual solution is revealed, followed by dis-



cussion and references. **Purpose:** The purpose is to provide many examples of problems or precarious situations encountered in pediatric anesthesia and to discuss how best to prevent or deal with them. This is a worthy objective not only for the specific problems discussed, but for the overall message of anticipation of problems, vigilance, and problem solving skills in anesthesia. **Audience:** All practitioners of pediatric anesthesia will find the cases discussed here useful and thought provoking. The book will be of particular use to faculty and residents to form the basis for teaching discus-

sions. The author draws upon 30 years of pediatric anesthesia practice for the majority of the cases presented. **Features:** Each case is presented on one page, and includes information needed to prevent a disaster. The following page provides a solution and analysis of the problem, makes recommendations, and provides references for further reading. The cases are presented in a concise manner, and the references are specific and current. The solutions provided are what actually happened in each case, with a full differential diagnosis sometimes not discussed. **Assessment:** Overall, this is a useful book because it discusses many actual and varied clinical problems which did and can arise in pediatric anesthesia. It provides a useful look at the ways in which problems can occur in clinical practice. As important, it discusses ways in which anticipation of potential problems, vigilance and good problem-solving skills are essential in anesthesia.

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## Book Reviews

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### Current Review of Minimally Invasive Surgery

By David C. Brooks, M.D. (Harvard University) Springer-Verlag New York Inc. (1998) 21 chapters, 233 pages, \$150 hardcover.

#### Doody's Notes:

Primary audience is surgeons. Secondary audience is surgery residents. The book contains predominantly two-color illustrations, with some black-and-white illustrations and color illustrations.

*Reviewed by John F. Sweeney, M.D., University of Michigan Medical School, Ann Arbor, Michigan.*

**Description:** The second edition of this book evaluates and updates a variety of general, urologic and pediatric laparoscopic surgical procedures.

**Purpose:** This edition contains reviews on new areas of interest, including anesthetic considerations and physiologic changes associated with laparoscopy, new technological developments in laparoscopic instrumentation and medicolegal aspects of laparoscopic surgery. **Audience:** This book is written primarily for surgeons with an interest in minimally invasive surgery, but I am confident that it will also serve as an excellent resource for nonsurgeons, residents and medical students. The chapters are well organized and easy to read. Dr. Brooks is a

credible authority in the field of laparoscopic surgery. Furthermore, he has enlisted the participation of several nationally and internationally recognized experts in the field of laparoscopic surgery as contributors to the book. **Features:** The material can be divided into five separate sections: "traditional" general surgical laparoscopic procedures; subspecialty laparoscopic surgical procedures, such as urology, thoracic surgery, pediatric surgery; anesthetic considerations and physiologic changes associated with laparoscopic surgery; technological advancements in laparoscopic surgery; and medicolegal aspects of laparoscopic surgery. The illustrations and schematic diagrams contained in each of these chapters are very helpful. Many chapters contain black-and-white photographs of actual laparoscopic procedures, with color plates of the photographs collected in total at the end of the book. It might be more helpful to the reader if the color plates were placed in the text at the appropriate position instead of the black-and-white photographs, but this is a minor shortcoming and does not diminish the overall value of the book. **Assessment:** All in all, I found this second edition to be an excellent extension of material contained in the first edition. This book will be an extremely practical resource to any individual interested in minimally invasive surgery. 