SAMBA Communications:

Where Are We Going? How Do we Get There?

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I began my training in anesthesia in 1979. My now-grown daughters are convinced that I had to dodge mastodons on the way to work back then, and that I "anesthetized" patients by hitting them with rocks. Given the advancements in pharmaceuticals, monitoring and techniques over the many years since, sometimes I think they are probably not too far off base!

So much has changed in medicine in the last 30+ years, yet much has remained the same. Yes, technology has changed a lot! However, the focus on taking care of patients and needing to deal with local and national "politics" and the business side of medicine has not changed. The particulars of the issues may have become more complex, but the basics are the same: safely caring for people who entrust their lives to us, while we work within organizations that are struggling to survive constant change.

SAMBA is an organization that represents the unique needs of anesthesiologists who practice partly or completely outside the "inpatient" realm. As surgeons, patients and procedures have moved to specialized outpatient and office settings, we anesthesiologists have followed in droves. We are all hungry for information about new techniques, and about refinements in traditional practice. What are our colleagues doing? What's safe? What's not?

Recently, SAMBA sent out a survey, asking members to give their opinions about how we are doing as an organization with providing you essential information. Although surveys typically suffer from low response rates (and this one was no exception – less than 200 responses) it may provide some ideas that will help SAMBA better meet your needs in the future.

Many of you would like shorter "bites" of information, and you want them to be more frequent. More members are using "social media" (e.g.: Facebook, Twitter, LinkedIn, among others) but e-mail continues to be very popular.

The "newsletter" format has been a traditional source of communication, but as we transition to including other media tools, it doesn't need to be the sole method – or even the primary method. We should evolve our communication methods, otherwise we risk becoming extinct (like the mastodons I no longer need to avoid...)

On the next page are a few suggestions from the survey:
Interviews with key people in ambulatory anesthesia

Highlight progress with ongoing projects

Teaching fliers

Emails, CME courses, practice guidelines and protocols

Clear messages about initiatives and more clinical Q & A

Text messages, videos

Direct messages from leadership with concise summary of the vision for SAMBA and concrete agenda for the year, plus periodic updates on progress.

Focus on the question - how will this item change practice?

More information on pediatric anesthesia and regional anesthesia in the OP setting.

Journal watch abstracts of recent relevant articles, or links to them

Difficult case discussions

Expanded question/answer/dialogue section

How to be effective practitioner

Make sure it is up to date with leadership/committee information, meeting information, etc.

Provide easy access to usable summaries of literature and practice recommendations.

Business Practice info, standardize forms for practice

More legal info pertaining to anesthesiologists

Do you agree? Disagree? Do you have other ideas? Please contact me <srspring@wisc.edu> or SAMBA leadership so that we can continue to meet your needs!  SRS ❖

Meetings!

SAMBA’s 30th Annual Meeting: April 23-25, 2015  Scottsdale, Arizona

You won't want to miss SAMBA's 30th Anniversary meeting at the beautiful Hyatt Regency Scottsdale Resort & Spa at Gainey Ranch. Make plans now to join your colleagues April 23-25, 2015 for three days of education, networking, and camaraderie.

As always, great networking opportunities will be available at the Welcome Reception, along with the Saturday evening Social Event to be held in the Palm Grove at the Hyatt.

The schedule includes sessions on NORA and MAC Sedation: Safety, Monitoring & Delivery; Regulatory and Legislative Update; Pre-operative Evaluation Clinic; Post-operative Recovery Room; NORA – Site Specific Issues and Solutions; and much more. Consult the experts, problem-based learning discussions, cases from the real world and ultrasound workshops will round out the content.

Watch www.sambahq.org for additional information.

International Association for Ambulatory Surgery (IAAS)

SAMBA is a founding member of the International Association for Ambulatory Surgery (IAAS). This congress will offer great scientific (including a SAMBA session) and networking value to our members. SAMBA members will get a discount price because of our membership. Barcelona is a very desirable tourist attraction in the Spring.

The congress website is: http://www.iaascongress2015.com
According to Alexander Pope, hope springs eternal and as I conclude my tenure as your president, I have high hopes. High hopes for the success of our upcoming annual meeting and high hopes for the future of the Society. Let me share some of the exciting things happening within the Society:

The SAMBA Clinical Outcomes Registry (SCOR) continues to grow and become a valuable tool for tracking performance outcomes. With over 125,000 current cases and more being entered every day, SCOR has never been a more valuable tool for SAMBA members. As of December 1, 2014, the ASA’s Anesthesia Quality Institute (AQI) assumed the management of SCOR; the data will be maintained separately and securely and marketed and branded as a new ambulatory module under NACOR. With AQI’s expertise, I am confident the SCOR registry will continue to grow, providing more outcomes data and reports for our field. This is one of the great benefits of your SAMBA membership and I hope you will consider participating and growing this important data.

SAMBA’s webinar series has gained momentum this year with guest speakers presenting on key areas of interest each month.

SAMBA’s webinar series has gained momentum this year with guest speakers presenting on key areas of interest each month. In the last few months, the following experts have spoken: Joshua Zimmerman, MD, on TTE for Ambulatory Patients; Girish Joshi, MBBS, MD on Adult Patients With OSA For Ambulatory Surgery: An Update; and Walter Maurer, MD, on SEDASYS. Next in the Series will be Rebecca Gerlach, MD, speaking on Implantable Cardiac Devices on March 18th. There is no charge, so please join us for this upcoming webinar.

Our affiliation with the International Association for Ambulatory Surgery (IAAS) continues to strengthen. I’d like to thank Kathryn McGoldrick, MD and Raafat Hannallah, MD for their efforts as SAMBA’s delegates to IAAS. Kathryn recently stepped down and Raafat will step down following the April IAAS Congress in Barcelona. I know SAMBA’s new delegates—Girish Joshi, MBBS, MD and Beverly Philip, MD—will further strengthen SAMBA’s relationship with IAAS.

Last but not least, SAMBA will hold its 30th annual meeting this spring in Scottsdale, Arizona. I invite all of you to join me at the Hyatt Gainey Ranch, April 23-25, to celebrate this momentous occasion. We have a great line-up of speakers and cutting-edge topics, including NORA and MAC Sedation: Safety, Monitoring & Delivery; 23 Hour Stay/“Big” Outpatient; Rapid Fire Sessions on MH, OR Fire Prevention and Local Anesthetic Toxicity Rescue; and NORA Site Specific Issues and Solutions. Of course, our meeting wouldn’t be complete without some annual favorites: Cases from the Real World; Regional Ultrasound Workshops; Journal Club and a Regulatory and Legislative Update. Re-energize yourself with some great educational sessions, visiting with friends and colleagues and a little relaxation in the beautiful Valley of the Sun.

Hope to see you there.❖
Preoperative Medical Consultation:

You May Be Asked to Decide Who Should Have One

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A lecture with the above title was presented by Stephan Thilen at SAMBA’s 2014 mid-year meeting in New Orleans. Every patient undergoing surgery sees both a surgeon and an anesthesiologist preoperatively. In addition, a subset of patients are seen in preoperative medical consultation, most commonly this involves a family practitioner, a general internist, or a cardiologist. Although there are now over 1000 practice guidelines in medicine, there are no national guidelines applicable to the majority of patients for when preoperative medical consultations are indicated. Moreover, previous studies have shown that there is often confusion amongst physicians regarding the reasons for which a consult is requested as well as the purposes that the consultation serves.

The most valid reason to have a patient seen preoperatively by a third physician is to add unique expertise beyond what is provided by the surgeon and the anesthesiologist. This concept is illustrated by the Venn diagram in figure 1, the red area outside the yellow and blue circles represent the unique expertise offered by the consultant. However recent research shows that referral for preoperative medical consultations currently are not driven by medical factors. Studies also show that consultations are often provided for low-risk patients, and this is the case also when these patients undergo low-risk procedures. In a recently published study based on 556,000 Medicare patients who had cataract surgery, it was found that the frequency of consults had increased from 11.3% to 18.4% over the time period 1995 to 2006. Consultations were not significantly associated with co-morbidities, but were associated with increased age, urban residence, facility (outpatient hospital vs. ambulatory surgery center). The involvement of an anesthesiologist (either medically directing or personally administering anesthesia care vs. a non-medically directed CRNA) was also associated with more frequent consultations, however the most important predictor was geographic region with the Northeast having the most frequent use of preoperative consultations. Substantial geographic variation has been found also in other settings. A study of patients undergoing major surgery in Ontario found unwarranted variation with the frequency of preoperative medical consultations ranging from 1% to 90% between the 79 hospitals that were included.

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While there are several reports on the cost of preoperative testing and the total cost has been estimated to be in excess of $18 billion, there is a paucity of data relating to the magnitude of resources that are allocated to the provision of preoperative consultations. In an analysis of Medicare data, including patients who underwent common operations, it was found that the cost of preoperative medical consultations was greater than the cost of preoperative testing. Clearly, the cost of preoperative medical consultations is substantial and it is becoming increasingly important to ensure that this resource is used appropriately. Ideally, referral for preoperative medical consultations should be guided by outcomes data, however such data is quite limited. The largest outcomes study to-date showed no benefit of preoperative medical consultations and more data on which patients would be most likely to benefit from preoperative medical consultations is urgently needed.

The notion that anesthesiologists should decide who needs a preoperative consultation was presented by Lubarsky and Candiotti in 2009. There are several arguments that can be made in support of anesthesiologists assuming this responsibility. First, the anesthesiologist is the primary user of the consultation report. Anesthesiologists are experts in assessing perioperative risk and know what is needed for safer care and therefore know what to ask the consultant to address. Second, anesthesiologists are “the common denominator” in perioperative care because we represent the only specialty that is involved with every surgical patient and therefore are in a unique position to coordinate care and implement a rational approach to the use of preoperative medical consultants. Third, this new paradigm is consistent with the ASA vision of anesthesiologists assuming a leading role in the Perioperative Surgical Home (PSH). The PSH is defined as a patient-centered and physician-led multidisciplinary and team-based system of coordinated care that guides the patient throughout the entire surgical experience. Fourth, it is likely that taking responsibility for perioperative resource utilization will be financially incentivise. Future payment models, including bundled payments and accountable care organizations, aim to incentivize coordinated and cost-effective care.

In summary, there is substantial use of preoperative consultations also for low risk patients undergoing common procedures. Use of preoperative consultations and their associated cost appear to be increasing. Given that there is little support for many consultations in patients with low cardiac risk undergoing outpatient, non-vascular surgery, there may be an opportunity to achieve savings by implementing more appropriate use of these resources. A recent study suggests that anesthesiologists may be uniquely qualified to reduce the number of unnecessary tests. There is good reason to think that we are also well prepared to improve on the ordering of preoperative medical consultations and that we may be well positioned to guide and implement appropriate use. Such implementation may be one advantageous component of the proposed Perioperative Surgical Home.

References:
Peter S A Glass, MD is the Recipient of the 2015 SAMBA Distinguished Service Award

Reported by: Raafat S. Hannallah, MD Chair, SAMBA Committee on Awards
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The SAMBA Distinguished Service Award (DSA) is the highest honor our Society can bestow upon an individual for exceptional service to ambulatory anesthesia. The Committee on Awards considers nominations from members and presents a name to the Board of Directors for a vote. Past DSA recipients include individuals who have dedicated their careers to the advancement of the specialty. This year’s recipient is no exception. Dr. Peter Glass was selected and unanimously approved by the SAMBA Board of Directors to receive the 2015 SAMBA Distinguished Service Award in recognition of his outstanding service to ambulatory anesthesia and for promoting anesthesiologists as leaders, educators, and scientist in the field.

The award will be presented on Friday, April 24, 2015, during the SAMBA 30th annual Meeting at the Hyatt Regency Scottsdale Resort & Spa in Scottsdale, Arizona.

Dr. Peter Glass is one of the pillars of ambulatory anesthesia. It is fair to state that without his research and educational effort the practice of ambulatory anesthesia today would not have been the same.

Many academicians spend a life time working on projects that have little clinical relevance to patient safety and comfort. Not Dr. Glass. His research interest focused on the pharmacology of analgesics, anesthetics and muscle relaxants; drug delivery systems; postoperative analgesia; ambulatory anesthesia and the study of Target-controlled infusions.

Almost all the SAFE (short-acting, fast emergence) drugs that we use today have been studied and made popular in ambulatory anesthesia by Dr. Glass and his team at Duke University. Think propofol, remifentanil, ondansetron, alfentanil, midazolam, vecuronium etc.

A South African native, he immigrated to the US and pursued an academic career in anesthetic pharmacology which led to his appointment as Professor with Tenure at Duke University Medical Center in Durham, North Carolina. In 1999 he accepted the position of Professor and Chairman (now Retired) at the Department of Anesthesiology State University of New York at Stony Brook, New York.

Dr. Glass’ services to SAMBA are innumerable Since 1996, he was a member, chair, or co-chair of such important committees as (the actual list is exhaustive and is best found in a copy of his CV) the SAMBA Committee on Awards, Research, Education, Annual Meeting, Mid-Year Meeting, Membership, Task Force on Ambulatory and Office-Based Fellowships, SAMBA Committee on Clinical Outcomes and Performance Measures, etc. He served as Secretary (2008), and President (2011) of our Society, and with Lucy Everett, co-championed the SCOR project for SAMBA.

Dr. Glass also represented SAMBA to important outside organizations such as the SAMBA-JCAHO Ambulatory Professional and Technical Advisory Committee, and in 2005 was elected by the SAMBA Board to serve as Section Editor, Ambulatory Anesthesia, Anesthesia & Analgesia. A position that he still holds (but due to retire from this year) to date.

Some of his “outside” interests include being a member of the Board of the Society of Intravenous Anesthesia, the ASA Section on Drug Disposition and Metabolism, USP DI Section on Anesthesia, President, Society of Intravenous Anesthesia, Scientific Advisory Board, Association of University Anesthetists, ASA Subcommittee on Drug Disposition, Scientific Papers, and Clinical Forum, and Clinical Circulation.

With this very productive and distinguished career, mostly focused on making Ambulatory Anesthesia practice safe and evidence-based, Dr. Glass is now “retired” into a new phase of his life as a President and Chief Medical Officer, GBS Health, a company that is developing office-based ambulatory procedure suites.

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Dr. Glass has a passion for golf, and when he chaired the annual meeting made every effort to have some tee-time available for the attendees to enjoy the venues.

Editor’s Note: Members are invited to submit nominations for the DSA award. For a nominating form, please contact the Committee on Awards via e-mail at info@sambahq.org, or by phone at (312) 321-6872. Nominations must include a cover letter, a copy of the nominee’s curriculum vitae and no more than four letters of support of the nomination.

Distinguished Service Award Past Recipients (1994-2014) are: (* = Deceased)


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Just as surgical techniques for breast surgery have undergone significant changes in recent years, analgesia for patients now includes drugs that stimulate rapid recovery with a high degree of postoperative comfort. Accompanying pharmacological advances, the evolution of ultrasonography as an adjunct tool has contributed to the development of new techniques for peripheral nerve blockade. Nerve blockade provides optimal analgesia for many breast procedures, which can minimize the need for opiates and decrease their adverse effects.

Ultrasound-guided blockade of pectoral nerves has generated interest for use in patients undergoing reconstructive breast surgery. Ultrasound-guided blockade of cutaneous branches of the intercostal nerves has been used for non-reconstructive ambulatory breast surgery. The cutaneous branches blocked are between the pectoralis major muscle and the external intercostal muscles at the parasternal level. The lateral cutaneous branches of the intercostal nerves are blocked at the fascial level between the anterior serratus and intercostal muscles.

In searching for optimal analgesic conditions for outpatient breast surgery (high intra- and postoperative analgesia), an ultrasound-guided block has been tested with administration of local anesthetic in the interfascial plane between the anterior serratus and intercostal muscles. With this method, the branches of the intercostal nerves are blocked at the mid-axillary line (BRILMA, that is, Blocking the bRanches of Intercostal nerves in the Middle Axillary line). The block was first reported in January 2013. In April of that year a prospective study in 30 patients was published and in November, a study in 4 female volunteers appeared.

Given the anatomical position of the intercostal nerves and the desired spread of local anesthetic between the anterior serratus and intercostal nerves, a pilot study in cadavers was designed to reveal anatomical landmarks and the spread of interfascial fluid. Methylene blue, 15 cc, was injected in the anterior serratus/intercostal fascial plane under ultrasound in 15 cadavers. After 15 minutes, the chest wall was dissected to track the spread of methylene blue. Visual inspection of the dissected specimens showed that 15 cc of methylene blue was sufficient to spread the dye between the 2nd and 6th intercostal spaces in the interfascial plane. Our results were corroborated by others in patients using thoracic T2 magnetic resonance with fat suppression after local anesthetic injections (Figure 1).6

OBJECTIVE

The main objective of this study was to determine the efficacy of pain relief and safety of BRILMA in patients...
scheduled for non-reconstructive surgery of the breast and axilla. Secondary objectives were to evaluate complications of the block, patient satisfaction, and surgeon satisfaction with the anesthetic.

MATERIAL AND METHODS

Our study included 100 women, 18 to 75 years of age, with an ASA physical status of 1-3, who were scheduled for non-reconstructive ambulatory breast surgery. The study was approved by the hospital’s ethics committee, and informed consent was obtained from all patients. For this study, non-reconstructive surgery was defined as surgery not involving placement of implants, expanders, or muscle re-arrangement. Patients scheduled for simple lumpectomy in one breast quadrant or those requiring reconstructive breast surgery were not included in the study. Patients who needed localized tissue re-arrangement as part of lumpectomies were included.

Exclusion criteria were as follows: ASA physical status 4, weight <30 kg or BMI > 40 kg/m2, preoperative criteria compatible with a difficult airway, high risk of regurgitation, chronic or acute respiratory disease, allergy to local anesthetic or other drugs used in the study, generalized or local infection, pre-treatment with opioids, chronic pain in the anterolateral region of the chest or axilla, difficulty understanding the rating scales of pain, or refusal of anesthetic technique.

Patients were pre-medicated with midazolam, 0.03 mg/kg, and ranitidine 50 mg intravenously (IV) one hour before surgery. Standard monitors (electrocardiogram with two leads, peripheral oxygen saturation, end expiratory carbon dioxide (ETCO2) pressure, and non-invasive blood pressure) were applied in the operating room, and anesthetic depth was measured by bispectral index (BIS).

Anesthesia was induced with IV propofol 2.5 mg/kg to reach a BIS between 30 and 40. A laryngeal mask airway appropriate for the patients’ weight was inserted. Controlled ventilation was maintained aiming at a CO2 pressure between 35-40 mm Hg. Anesthesia was maintained with sevoflurane to a BIS value between 40 and 50.

Anatomy and description of the technique

The innervation of the breast and axilla arises from the 2nd to the 6th intercostal nerves. The intercostal nerves (ventral rami of thoracic spinal nerves) run between the inner and intimal intercostal muscles. There are two perforating branches (lateral and anterior), which are cutaneous branches of the intercostal nerves. The lateral cutaneous branch of the intercostal nerve emerges from its location between the internal and intimal intercostal muscles, passing through the external intercostal muscles and the anterior serratus muscle at the mid-axillary line. It then branches at the subcutaneous level into the anterior branch of the lateral cutaneous branch of the intercostal nerve, and the posterior branch of the lateral cutaneous branch of the intercostal nerve. The anterior cutaneous branch of the intercostal nerve tracks to the parasternal level between the inner and intimal parasternal intercostal muscles and emerges to skin at that point. The injection of local anesthetic at the mid-axillary line between the anterior serratus muscle and the external intercostal muscles blocks the lateral cutaneous branch of the intercostal nerve, before it divides into anterior and posterior branches. The anterior cutaneous branch of the intercostal nerve is blocked when local anesthetic diffuses from the external to the intimal intercostal muscles. This diffusion is easily identified in cadavers with the spread of methylene blue (Figure 2), which also reaches the lung tissue. The nipple-areola region has complex innervation, with contributions from the lateral cutaneous branches of the 3rd, 4th, and 5th intercostal nerves. The main contributor to this plexus, however, is the 4th intercostal nerve (Figure 3).

Equipment included an ultrasound machine (Sonosite, Bothell, WA, USA) and peripheral nerve block needles (85 mm 22G Echoplex, Vygon, Ecouen, France) sterile gel, syringes and 0.25% levobupivacaine. An anesthesiologist with extensive training in ultrasound-guided regional techniques performed the block. The site of block insertion was prepared with antiseptic solution. The surface of the ultrasound probe was covered with a sterile sheath. Patients were positioned supine with the upper limb abducted to 90° (Figure 4).

BRILMA was performed by using a high-frequency linear transducer coupled to an M-Turbo ultrasound system. First the fatty subcutaneous tissues were identified. At the intermediate level, the anterior serratus muscle, ribs, and external, internal, and intimal intercostal muscles were identified. At the deep level, pleura and lung were

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identified. If the anatomy of the patient made it difficult to identify these structures (e.g., gigantomastia or morbid obesity), a low-frequency convex ultrasound probe was used.

The ultrasound probe was oriented in a cranial-caudal direction, and the needle was introduced with the tip between the fascia of the anterior serratus and external intercostal muscle. To check for accurate positioning of the tip of the needle, 1 cc of saline was administered. Once the correct position of the needle tip was verified, 3 ml of 0.25% levobupivacaine was injected to a total of approximately 15 ml, depending on the spread visualized. Using hydrodissection through the fascial planes, the needle was advanced to increase spread of local anesthetic to the upper intercostal spaces (Figure 5).

All patients received IV dexamethasone 4 mg after induction and 1 g of paracetamol, 50 mg of dexketoprofen, and 4 mg of ondansetron 30 minutes before emergence. If heart rate (HR) or mean arterial pressure (MAP) increased by 15% or more over basal values at the time of surgical incision, a single or repeated bolus of IV fentanyl 1 mcg/kg was administered to bring HR or MAP to within 15% of basal values. The total amount of intraoperative opioid was recorded. If there was difficulty with ventilation or if muscle relaxation was needed in the surgical field, 0.3 mg/kg of IV rocuronium was administered. The time elapsed between blockade and surgical incision was recorded. HR and MAP were recorded on patient arrival to the operating room before induction, before surgical incision, and at the time of surgical incision to the breast or axilla.

The intensity of postoperative pain was assessed by a numerical rating scale (NRS) from 0 to 10 (0-3 categorized as mild pain, 4-6 as moderate pain, and 7 or more as severe pain). The goal for pain management was a score of 3 or less in the post-anesthesia care unit (PACU). Pain was assessed upon arrival to PACU, 1 and 2 hours after arrival, and every 8-24 hours postoperatively. Postoperative analgesia consisted of paracetamol 1 g every 6 hours and IV dexketoprofen 50 mg every 8 hours during PACU stay. Boluses of 3 mg of morphine were administered when pain was greater than 4 to achieve a score of less than 3. After discharge, oral dexketoprofen 25 mg every 8 hours, paracetamol 1 g every 6 hours, and of tramadol 50 mg were prescribed for pain relief.

The need for rescue analgesia and the number of hours of sleep on the first night after the procedure were recorded. All intra- and postoperative complications, if any, were evaluated (e.g., bleeding, nausea, vomiting, seizures). Patient and surgeon satisfaction with pain control were also assessed using the following scale: Very poor, poor, fair, good, and very good. Statistical analysis was performed using SPSS 10 (IBM) software.

RESULTS

Table I shows the demographic variables, ASA physical status, and the type of procedure performed for our 100 patients. The average time for completion of the BRILMA was 6 ± 2.5 minutes (mean ± SD). Mean time between the block and the start of the surgical incision was 5.84 ± 3.2 minutes. The localization of the interfascial plane between the anterior serratus muscle and the external intercostal muscle was optimal in all patients. The full path of the needle was difficult to follow in 8 patients who had bulky breasts.

Of 100 patients, 4 required intraoperative fentanyl after incision. The remaining 96 patients had no significant hemodynamic changes at incision or during repositioning of patients. Neuromuscular blockade was necessary in 7 patients (2 because of surgical technique and 5 because of movement during changes in patient position).

Upon awakening patients reported pain as 0-3 in all cases. Rescue analgesia with morphine at 60 minutes postoperatively was needed for 3 patients with a pain level of 5. No other patients required rescue analgesia after discharge from the PACU or for the first 24 hours after surgery. Nausea without vomiting was reported by 6 patients, coinciding with the start of oral consumption after discharge from the PACU. There were no other complications or adverse effects reported during the study period (Table 2).

The duration of analgesia after BRILMA was 19 ± 3.5 hours. The number of sleep hours during the first night after surgery was 5 ± 2.3 hours. The hospital stay in all cases was less than 48 hours. Surgeon satisfaction was assessed as “very good” by 97% of surgeons and as “good” By 3%. Patient satisfaction was rated as “very good” in all cases.
DISCUSSION

An unpublished pilot study by our group yielded valuable information as a guide to the potential distribution of local anesthetic in the interfascial planes of the chest wall. The data from that study was used as a primer for the current study. In the pilot study, methylene blue was injected between the external intercostal and anterior serratus muscle in cadavers. The distribution of dye in cadavers might not necessarily correlate to in vivo spread of local anesthetic for several reasons: the active mechanical movement of the chest wall in patients, the difference in velocity between methylene blue and local anesthetics, and the body temperature at which blocks are performed.

Under ideal conditions, continuous tracking of the needle tip during ultrasound-guided techniques is necessary to reduce the risk of complications associated with improper placement. Local anesthetic should not be injected within the intercostal muscles, which can result in swelling or expansion of the intercostal space, and might lead to shifting of the parietal pleura and less dissemination of local anesthetic. Similarly, anesthetic is not injected in the body of the serratus anterior muscle. Diffusion of local anesthetic is necessary for BRILMA to work, and intramuscular injections would theoretically prevent diffusion.

BRILMA is a simple block, and technical difficulties should be relatively few. The block is easily reproducible, and the learning curve for anesthesiologists not familiar with the technique should be short. Once block performance is mastered, the desired fascial planes can be accessed through a single puncture. This block can be performed in awake/sedated patients as well as patients under general anesthesia, given its margin of safety and low volumes of local anesthetic. Depending on the size of the patient and the desired spread of local anesthetic, a block needle 85 mm or longer is used.

The results of this study suggest that the BRILMA can be performed with minimal or no complications. BRILMA offers excellent pain relief for patients undergoing non-reconstructive breast surgery. Narcotic rescue was minimal in our study. Both patient and surgeon satisfaction was high.

The applicability of this block may not be limited to breast surgery. BRILMA has been used in patients with chronic breast pain, chest trauma, rib fractures, and before placement of chest tubes. Since paravertebral blocks are considered the gold standard for pain control for breast surgery, we suggest the need for future studies comparing BRILMA to such blocks. 10-12

| TABLE 1: Demographic characteristics, ASA physical status, side of intervention, type of procedure. |
| Age (years) | 51 ± 7 |
| Weight (kg) | 66 ± 7 |
| Height (cm) | 161.9 ± 7 |
| ASA (1/2/3) | 65/23/12 |
| Surgical side (left/right) | 58/42 |
| Type procedure |  |
| Lymphectomy + sentinel node | 62 |
| Lymphectomy + lymphadenectomy | 15 |
| Mastectomy + sentinel node | 8 |
| Mastectomy + lymphadenectomy | 15 |

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REFERENCES


Contact us at SAMBA!

Do you have questions for a member of SAMBA’s staff? Please see the directory below. If you would like to e-mail your question, please send it to SAMBA@asahq.org. Note: we get many questions about the practice of outpatient anesthesia; we can only answer those questions if you are a member of SAMBA. Why not join now? Go to membership page.

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