

# ASCCA INTERCHANGE

AMERICAN SOCIETY OF CRITICAL CARE ANESTHESIOLOGISTS

Volume 14 Number 4

www.ascca.org

December 2002 - February 2003

## President's Message

### New Year's Resolution: Positive Changes for 2003

By Clifford S. Deutschmann, M.D.  
Philadelphia, Pennsylvania

In *A Tale of Two Cities*, Charles Dickens said of the period leading up to the French Revolution, "It was the best of times, it was the worst of times." While revolution is not imminent, ASCCA has reached a point in its evolution where important choices must be made. The agenda our organization adopts will have a crucial impact not only on ASCCA but also the practice of critical care medicine in all of anesthesiology. It is my belief that our choices will affect the specialty as a whole.

At this time, there are unique and potentially limitless opportunities for those of us who practice critical care medicine. Demand for intensivists is about to skyrocket due to the confluence of several factors. First, data demonstrating that intensivists improve outcome and save money have become overwhelming. A recent publication by ASCCA member Peter J. Pronovost, M.D., Ph.D. (*JAMA*. 2002; 288:2151-2162), uses an evidence-based approach to examine studies

comparing critical care delivered under high-intensity staffing (mandatory involvement of an intensivist or closed unit) and low-intensity staffing (no intensivist or elective consultation of an intensivist). The results are clear — high-intensity staffing was associated with lower mortality and reduced hospital stays. Studies such as these have led the Leapfrog Group, a consortium of Fortune 500 companies that are major consumers of health care services, to recommend high-intensity staffing to their clients. Hospitals and practice groups are attempting to gear up to provide care that meets these recommendations. As these changes increase the demand for qualified practitioners of critical care medicine, there is a clear indication that the number of patients requiring intensivists is increasing. A Committee on Manpower for Pulmonary and Critical Care Societies (COMPACCS) study (Angus, et al. *JAMA*. 2000; 284:2762-2770) indicates an increasing demand for intensivists to meet the needs of an



Clifford S. Deutschmann, M.D.

aging population in intensive care units (ICUs). To compound the issue, COMPACCS also indicates that the number of qualified intensivists is unlikely to meet the demands of ICUs. This study does not even attempt to examine demand for surgical ICUs, which is certainly even higher. The increase in demand is likely to escalate salaries for intensivists. The point here is that the value of what we do is increasingly recognized, and the demand for our services is likely to increase. Conditions could not be better for anesthesiologists interested in a scope of practice that includes critical care medicine.

And what has the anesthesiology community in general and ASCCA specifically done to take advantage of these opportunities? In two words: **NOT ENOUGH**. The anesthesiology community as a whole has not greeted this opportunity. From an academic point of view, far too few residencies present their trainees with a

*There was no lack of stimulating discussion at the ASCCA 2002 Annual Meeting (see article on page 3). Here, Robert N. Sladen, M.B., Ch.B., hosts the questions-and-answers session following the lecture of Carl C. Hug, Jr., M.D., Ph.D., recipient of the ASCCA 2002 Lifetime Achievement Award.*



(Photo by Chad Evans Wyatt)

Continued on page 11

## CONTENTS

- |  |  |
|--|--|
| 1 President's Message  | 8 President's Term Expanded to Two Years                                       |
| 2 Editorial: Awaiting Renaissance  | 9 ASA Delegate Update: House of Delegates Makes Definitive Statements for 2003 |
| 3 ASCCA 2002 Annual Meeting: Hard Science and Hot Topics                         | 10 Executive Committee Report  |
| 6 Clinical Pearls: Critical Challenges for Patients Undergoing Bariatric Surgery |  |

## MEMBERSHIP INFORMATION

### E-mail

You may e-mail inquiries to ASCCA at the following address:

[asca@ASAhq.org](mailto:asca@ASAhq.org)

### Membership

Membership in ASCCA is open to all anesthesiologists and residents in approved anesthesiology programs. Membership applications may be obtained by writing to **ASCCA**, 520 N. Northwest Highway, Park Ridge, IL 60068-2573.

### Web Page

You may visit the ASCCA World Wide Web site at:

[www.ascca.org](http://www.ascca.org)

### ASCCA Dues

Dues are \$150 for active members and \$150 for affiliate members. Resident members of ASA are provided joint membership in ASCCA through the Society's affiliation with *Anesthesiology*. Prompt payment of your dues is greatly appreciated by the ASCCA officers and directors. Remember, payment of your dues allows you to enjoy the full privileges of ASCCA membership.

## EDITORIAL NOTES

### Editorial Policy

The opinions presented are those of the authors only, not of ASCCA. Drug dosages, accuracy and completeness of content are not guaranteed by ASCCA.

### Editor

Michael L. Ault, M.D.  
Assistant Professor  
Department of Anesthesiology  
Northwestern University  
Medical School  
Chicago, IL 60611  
[mault@northwestern.edu](mailto:mault@northwestern.edu)

### Associate Editors

Paul R. Barach, M.D.  
Edward C. Bratzke, M.D.  
Maurizio Cereda, M.D.  
Kenneth G. Smithson, D.O., Ph.D.  
Laurence Torsher, M.D.

The ASCCA *Interchange* is published four times a year (March, June, September and December) by the American Society of Critical Care Anesthesiologists, 520 N. Northwest Highway, Park Ridge, IL 60068-2573; (847) 825-5586. Deadlines are six weeks prior to the month of publication (e.g., January 15 for the March issue).

## Editorial

### Awaiting Renaissance

By Michael L. Ault, M.D.  
Editor



Michael L. Ault, M.D.

Just a few years ago, anesthesiology was rarely if ever considered by high-caliber graduating medical students. Filling a residency program became a project based on prayers, stealing from other residencies and an exhaustive search for nontraditional applicants. Anesthesiology became the dreg of medical specialties. During this time period, job sat-

*I also wait for the reawakening to occur in my little subspecialty niche, and I am hopeful that this enthusiasm will slowly infect all of anesthesiology so that critical care medicine once again becomes a sought-after subspecialty fellowship.*

isfaction among academic anesthesiologists also plummeted, and a nadir of academic productivity filled most clinicians with despair. Each clinician in his or her department was focused only on the future because dealing with "today" was purely aimed at surviving the day.

Now, life in the academic anesthesiology department is much different. Residency

*Continued on page 12*

## ASCCA 2002 Annual Meeting: Hard Science and Hot Topics

By *Kenneth E. Scope, M.D.*

*Fellow, Department of*

*Anesthesiology*

*The Feinberg School of Medicine*

*Northwestern Memorial Hospital*

*Chicago, Illinois*

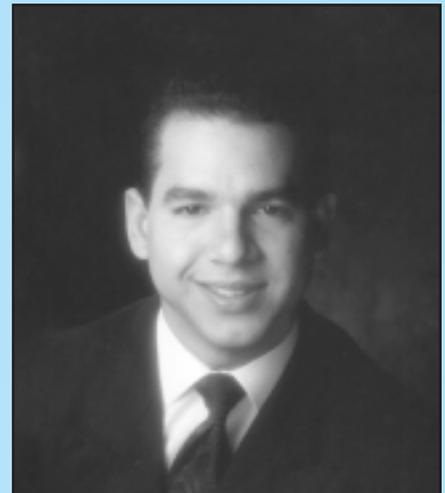
The ASCCA 2002 Annual Meeting was held in Orlando, Florida, on October 11. On-site registration was opened on Thursday night, followed by a welcome dinner hosted at the Rosen Centre Hotel. Attendees had a chance to meet colleagues and friends during dinner. Three lectures were given where participants learned about sedation in the intensive care unit (ICU), including sedation scales and delirium assessment in the critically ill patient as well as drugs utilized for sedation in the ICU, such as dexmedetomidine.

On Friday morning, the ASCCA programs were held at the Peabody Hotel. On-site registration occurred as breakfast was being served, followed by words of welcome from **Andrew Gettinger, M.D.**, Dartmouth Medical Center, who served as program chair. The first scientific session was moderated by **William E. Hurford, M.D.**, Massachusetts General Hospital, and consisted of five presentations. **Christian M. Kinstner, M.D.**, Columbia University, took the lead and spoke about the effects of arginine-vasopressin (AVP) on renal function and splanchnic and cerebral circulation in septic shock. The investigators studied patients requiring norepinephrine who were randomized to either AVP or a placebo in a double-blind fashion and recorded levels of pH in the stomach, transcranial dopplers and creatinine clearance, among other variables. Dr. Kinstner's group noted that while the gastric tonometry and cerebral blood velocity did not differ between the two groups, there was a significant improvement in renal function in the experimental cohort.

Dr. Gettinger was second at the microphone and shared his findings studying erythropoietin (r-HuEPO) administration to patients requiring intensive care. This large, multicenter trial involved more than a thousand patients who were randomized to a dose of either 40,000 units of r-HuEPO or placebo every week up to three times and who were then ob-

served for their transfusion requirements for one month. Transfusion requirements for the group treated were decreased by 19 percent. It was interesting that while most of the audience seemed to be very aware of and interested in these data, many of the questions arose about the cost-effectiveness of such therapy. Although the information presented by Dr. Gettinger did not include this analysis, he did express that the approximate cost of the treatment is 1 cent per unit. He emphasized that avoiding blood-borne diseases reduces health care cost remarkably in addition to money saved by fewer transfusions.

**Jeffrey H. Kozlow, M.D.**, Johns Hopkins School of Medicine, offered the next presentation. His research was a retrospective analysis of discharge data of 318,880 surgical adult patients from 52 Maryland hospitals that looked at incidence of wound infection and its relation to blood transfusions. This paper revealed an overall incidence of surgical site infection of



*Kenneth E. Scope, M.D.*

gical site infection made patients 3.6 times more likely to be admitted to the intensive care unit (ICU). It also increased their hospital stays

***Afternoon sessions began with a controversial topic regarding optimal Hct of patients with cardiac disease... This scientific session consisted of very thorough presentations — one “pro” and the other “con” — in an entertaining “duel” format between two colleagues who fused humor and scientific focus flawlessly.***

1 percent, which was highest among digestive tract procedures followed by those on the respiratory tract. The primary outcome variable observed was the incidence of wound infection, and when adjusted and unadjusted analysis were performed, the researchers identified patient characteristics associated with increased risk of infection and observed the impact on length of stay, intensive care needs, mortality and cost of care. Independent risk factors for infection were led by blood transfusions (with an odds ratio of 3:1) followed by renal disease and diabetes. Developing a sur-

on an average of nine days, added \$18,000 to their bill on average and almost tripled mortality rates. The association between blood transfusion and increased ICU admission, in-hospital mortality, length of stay and hospital charges was present in all surgery types.

**Michael F. Haney, M.D.**, Umea University Hospital, Umea, Sweden, followed with his presentation on myocardial effects of airway pressure elevation. He and his colleagues used a porcine model to demonstrate immediate

*Continued on page 4*

## ASCCA 2002 Annual Meeting: Hard Science and Hot Topics

(Continued from page 3)

changes in the cardiac contractility due to elevation of airway pressures. The design involved single beat measurements of pressure-volume curves during apnea and zero airway pressure and immediately after instituting continuous positive airway pressure. A control group was compared to two others in which the contractility was manipulated with positive or negative inotropes. The independent variable showed increased enhanced systolic performance but decreased ventricular compliance in all three groups. They hypothesized that the mechanism by which contractile function is affected must be mediated by a reflex since it occurs within one beat. Since the blood pressure did not change, they suggested the presence of other pathways different from baroreceptors, similar to lung-stretch mechanoreceptors.

Before the first morning break **Robert N. Sladen, M.B., Ch.B.**, Columbia University, on behalf of **Shahla Siddiqui, M.D.**, Columbia Presbyterian Hospital, explained his findings observing renal cell apoptosis in relation to the administration of norepinephrine. Dr. Siddiqui's research offers the potential of early detection of negative effects of vasopressor therapy in the kidney before azotemia occurs. This early-detection benefit is suggested by the elevation of proapoptotic mRNA in cells collected from centrifuged urine in patients receiving norepinephrine.

The morning sessions continued with the presentation of the Young Investigator Award by Dr. Hurford to **Stephen Cochran, M.D.**, Wake Forest University, for his paper "Alpha<sub>2</sub>-Mediated Vasoconstriction by Fenoldopam in Rat Renal Arteries In Vitro." The authors of this study designed an elegant experiment to try to elucidate the mechanisms responsible for the biphasic response of the vascular smooth muscle when exposed to incremental doses of fenoldopam, with special attention to the alpha receptors. To that effect, they created a model with rat renal artery preparations in which they measured tensions generated by the smooth muscle as an index of the response to different vasoconstricting agents. They were able to demonstrate a blocking effect of the secondary vasoconstrictive response after initial relaxation when the samples were ex-

posed to an alpha-2 blocker but not when given an alpha-1 antagonist; the latter behaved just as the control group. Interestingly, evidence was presented as to how fenoldopam decreases cerebral blood flow and disrupts cerebral autoregulation, which warrants its careful utilization in the neurologically injured patient.

Morning sessions concluded with the presentation of the Lifetime Achievement Award by



*Carl C. Hug, Jr., M.D., Ph.D., was the recipient of the ASCCA 2002 Lifetime Achievement Award.*

Dr. Sladen. The recipient this year was **Carl C. Hug, Jr., M.D., Ph.D.**, Emory University. It was very interesting to listen to his ideas regarding the practice of critical care medicine and anesthesiology. He acknowledged one of his patients, whom he called "one of my favorite cases," in a very eloquent, visual and organized manner by touching on different aspects of our profession, including ethics, decision-making processes, communication skills, problem solving, end-of-life situations and others. He quoted William Osler, M.D.: "Medicine is a science of uncertainty and art of probability," shared references and encouraged attendees to review those references. He moderated audience participation nicely and stressed how important it is that we act appropriately when confronting situations of unexpected outcome while under pressure and surrounded by unhappy patients and their families. He underscored the fact that accepting responsibility for an unpredictable outcome

does not necessarily create the obligation to reverse the complication. Among his examples: "If a patient is not a surgical candidate before going to the cath lab, he or she does not become one for suffering a cardiac arrest on the table."

Dr. Hug expressed the importance of assuming responsibility during difficult times and notifying patients and/or family about bad outcomes in a format that provides transparency, comprehension and offers explanations. He underlined how it is a professional obligation to accompany surgeons when delivering bad news, as it allows reassurance to the family that the patient did not suffer, offers clarification of misunderstandings and maintains consistency in the message. This teamwork approach also will prevent "the blaming game." When reporting such events, he suggested planning a setting based on the questions: where, when and who? Dr. Hug said that we must observe body language, acknowledge strong reactions and tolerate silence while being aware of our own feelings and biases. The goal is to reach common understanding with the patient and family as well as with other team caregivers. It also is important to follow up and document all the events.

Dr. Hug spoke of the need to accept death as a natural event, not as a failure. He distinguished cardiac arrest as an unexpected event, whereas the onset of nonperfusing cardiac rhythms in a patient with multiorgan failure on life-support most likely represents death, not cardiac arrest. He compared the definition of "futility" to the definition of "pornography" and stated, "They are both hard to define, but you usually recognize it." In this context, Dr. Hug says, "It is necessary to preserve the autonomy of our patients balanced by professional and institutional integrity."

Just prior to lunch, ASA President **James E. Cottrell, M.D.**, State University of New York Health Sciences Center, gave his address.

We then proceeded to lunch, which was kindly sponsored by Ortho Biotech. During lunch, we had the opportunity to listen to **Jay C. Buckey, Jr., M.D.**, from the Lyndon B. Johnson Space Center in Houston, Texas. Dr. Buckey shared with us his amazing experiences in space as a researcher for NASA, and he lectured on the effects of gravity on body functions and intrauterine development. He

concluded his presentation with amazing video footage of a space mission.

Afternoon sessions began with a controversial topic regarding optimal Hct of patients with cardiac disease that was discussed by **Paul C. Hébert, M.D.**, Ottawa Health Research Institute, and **Ronald G. Pearl, M.D., Ph.D.**, Stanford University. This scientific session consisted of very thorough presentations — one “pro” and the other “con” — in an entertaining “duel” format between two colleagues who fused humor and scientific focus flawlessly.

Dr. Hébert presented data that illustrated the lack of difference in outcome in patients managed with a liberal transfusion strategy compared to patients managed with a restrictive transfusion strategy. Dr. Hébert also emphasized the risks associated with blood transfusion, including the age-related dysfunction of stored erythrocytes.

Following Dr. Hébert, Dr. Pearl presented evidence that myocardial dysfunction occurs with drops in the hematocrit to as little as 33 percent. He also noted an association between hematocrit levels and tachycardia in the perioperative period. He stated that one of the problems with Dr. Hébert’s study was that 1,200 patients with known coronary artery disease were not enrolled because either the patients themselves, their physicians or family refused to participate in the study.

The second scientific session of the afternoon kept the controversy ambient. At this session, **Douglas B. Coursin, M.D.**, University of Wisconsin, and **Clifford S. Deutschman, M.D.**, University of Philadelphia, debated on the advantages and disadvantages of glycemic strict control. Dr. Coursin pointed out strong evidence in the literature that recommends keeping a tighter control of the serum glucose levels in patients with diabetes mellitus type I. Nonetheless, he cautioned that the evidence in relation to type II is not as strong but indicates that it may be beneficial. He then reviewed some of the mechanisms of injury mediated by hyperglycemia and its side effects, such as microvascular damage, impaired wound healing, leukocytes dysfunction, inhibited platelet aggregation, modulation of tumor necrosis factor secretion, altered macrophage migration, osmotic diuresis (with its associated ketoacidosis), hypovolemia and electrolyte imbalance.



(Photo by Chad Evans Wyatt)

*Neal H. Cohen, M.D., right, passes the President’s Gavel to incoming ASCCA President Clifford S. Deutschman, M.D., during installation ceremonies at the Membership Business Meeting, which immediately proceeded the ASCCA 2002 Annual Meeting in Orlando. Dr. Deutschman in his comments thanked the membership for bestowing their faith and trust in him to be their President for the next two years.*

ances. Dr. Coursin cited several studies to illustrate clinical differences in outcome, including a Belgium study that reported 4.6 percent versus 8 percent mortality, less incidence of acute tubular necrosis, multiorgan failure, length of stay and number of transfusions. He also mentioned the DIGAM study, which showed 33 percent versus 44 percent mortality, favoring more glucose control in patients with acute myocardia ischemia.

Dr. Deutschman replied in his “con” argument with the question, “Why do patients get hyperglycemic when injured?” He explained that cellular glucose uptake is increased during the perioperative period as opposed to cases of insulin resistance. He observed that the elevation of serum glucose is a consequence of gluconeogenesis, not impaired glycogenesis. In addition to this, Dr. Deutschman added that exogenous loads of glucose bear some responsibility in perioperative hyperglycemia. He presented facts that made the audience wonder why the human response to injury causes elevation of blood glucose levels. Among key players responding against injury are leukocytes, which are obligate glucose metabolizers. Although these defense cells truly do not work flawlessly in the presence of hyperglycemia,

the injury site rarely is hyperglycemic and not uncommonly hypoglycemic. Of note is the fact that, in response to stress, both glucose and insulin are elevated, but glucose levels stay higher. With regard to the Van Der Burgh study, which supports tighter glucose control, Dr. Deutschman pointed out a few weaknesses. First of all, only 13 percent of patients were diabetic; second, most patients were given glucose on the first day; and last, hypoglycemia occurred in some of the patients. Another possible problem caused by exogenous insulin is liver dysfunction as a consequence of its inability to utilize free fatty acids. Insulin drives glucose intracellularly, it does not destroy it. Finally, Dr. Deutschman said that most of these data suggesting strict euglycemia apply to diabetic and cardiovascular patients but not necessarily to other populations of patients.

The next block of presentations was an International Session that dealt with current trends of critical care medicine in Europe. **Heidi B. Kummer, M.D., Ph.D.**, Lahey Clinic, Burlington, Massachusetts, chaired the session. **Luciano Gattinoni, M.D.**, Istituto di Rianimazione dell’ Università degli Studi,

*Continued on page 10*

# ***Critical Challenges for Patients Undergoing Bariatric Surgery***

*By Antonio H. Conte, M.D., M.B.A.  
President and C.E.O.*

*Florida Atlantic Anesthesia, Inc.  
Medical Director, Surgical Services  
Holy Cross Hospital  
Fort Lauderdale, Florida*

Morbid obesity is one of the most prevalent medical disease states in the world, yet few treatment modalities have existed until the past decade. During the past 10 years, innovations in surgical techniques have improved upon traditional gastric bypass or “stomach-stapling” procedures. Surgery performed for the treatment of morbid obesity, commonly referred to as bariatric surgery, has allowed a large population of persons the opportunity to receive treatment for their disease.

As a result of the increase in the number of persons undergoing bariatric surgery, the anesthesiologist and critical care physician are now facing the task of managing morbidly obese patients during their perioperative course. The care of morbidly obese patients is a complex undertaking not only because of the obvious size of the patients but also because of the multiple underlying co-existing disease states commonly found in this population.

### **What Constitutes Obesity?**

As a society, North Americans have become increasingly obese during the past 50 years. It is estimated that 60 percent of adult Americans are obese, and the number appears to be rising every year. Obesity is defined as being 20 percent over ideal body weight for an individual of a given sex. It should be noted that the standards for “ideal body weight” are derived from the statistical analysis of life insurance demographics for morbidity and mortality in a given population; therefore, ideal body weight is not an indicator of the average weight for the same demographic group of persons.

Morbid obesity exists when a person is 100 percent over his or her ideal body weight, and super-morbid obesity occurs when a patient is 200 percent over his or her ideal body weight. The calculation of body mass index (BMI) is another useful means of

quantifying obesity. BMI is calculated by dividing weight in kilograms by the height in meters squared. The use of BMI is a helpful index because it quantifies the degree of obesity relative to the overall size of a patient.

### **Bariatric Surgery in the 21st Century**

Epidemiological and clinical studies have reported the effectiveness of weight loss in improvement or resolution of obesity comorbidities.<sup>1,2</sup> The morbidly obese population, however, is refractory long-term to conventional weight-loss therapies such as diet, exercise, behavior modification or pharmaceuticals.<sup>1,3,4</sup> The National Institutes of Health consensus conferences have defined morbid obesity as a distinct disease and now recognizes bariatric surgery as the only suc-

***As a result of the increase in the number of persons undergoing bariatric surgery, the anesthesiologist and critical care physician are now facing the task of managing morbidly obese patients during their perioperative course.***

cessful mode of weight-loss therapy for the morbidly obese.<sup>5,6</sup>

Over the last several decades, more than 30 bariatric procedures have been developed for the treatment of obesity, the majority of which have since been abandoned. The procedures that have dominated the field at various time periods during the evolution of bariatric surgery include the intestinal bypass, gastroplasty (stomach stapling) and the Roux-en-Y gastric bypass.

Developed in 1967, the gastric bypass was one of the earliest gastric restrictive procedures. It induced weight loss primarily as a result of reduced food intake and mild malabsorption. The original gastric bypass, however, had a high failure rate along with numerous complications. Nonetheless, the early gastric bypass led to the evolution of two major procedures utilized in the 21st century, gastroplasty and the Roux-en-Y gastric bypass.

In the 21st century, the Roux-en-Y gastric bypass is considered the “gold standard” in bariatric surgery, producing massive weight reduction (70 percent or greater) with maintenance of a 50-percent or more excess weight loss beyond 10 years. The procedure also leads to a nearly 100-percent improvement or resolution of most obesity comorbidities. Roux-en-Y gastric bypass is particularly effective in treating diabetes with more than a 90-percent resolution of the disease and a marked decrease (30-fold) in the long-term progression of impaired glucose tolerance to diabetes and a substantial reduction in mortality. Other beneficial effects of gastric bypass include: a 90-percent or greater resolution of hypertension and obstructive sleep apnea; a greater than 80-percent resolution of lipid abnormalities with a 100-percent improvement; a 100-percent improvement in asthma and 40 percent resolution; and a 95-percent improvement in psychosocial comorbidities (depression, anxiety and reduced quality of life).

Perioperative complications are relatively low with the Roux-en-Y gastric bypass procedure. Perioperative risks include those common to abdominal surgery, including but not limited to respiratory complications, potential for excessive bleeding or a cardiac episode, thrombus or pulmonary emboli, major organ damage, infection of the incision and incisional hernia.

### **Preoperative Evaluation of the Bariatric Patient**

Similar to other surgical procedures, all patients undergoing bariatric surgery must be evaluated by an anesthesiologist prior to the administration of an anesthetic. The preoperative evaluation should focus on the particular needs and co-existing disease states

common in this patient population. Several studies among the morbidly obese population have found an average of 3.7 major comorbid conditions per individual; therefore, the preoperative anesthesia evaluation is a key step in determining the anesthetic plan for the bariatric patient.

The anesthesiologist should focus his or her preoperative evaluation on key aspects of the patient's airway, gastrointestinal status, pulmonary function, cardiac status and endocrine function. Typically the morbidly obese patient may possess a difficult airway, cardiac dysfunction caused by long-standing hypertension, pulmonary derangements secondary to mass effects of obesity and the presence of diabetes and thyroid disease. Morbidly obese patients often manifest signs

***Several studies among the morbidly obese population have found an average of 3.7 major comorbid conditions per individual; therefore, the preoperative anesthesia evaluation is a key step in determining the anesthetic plan for the bariatric patient.***

and symptoms of sleep apnea and hypoxemia. Due to the presence of significant co-existing medical disease, consultations with specialists such as cardiologists and pulmonologists may be indicated.

#### **Perioperative Challenges and Demands Unique to the Bariatric Patient**

The anesthesiologist and critical care physician managing the bariatric patient should anticipate multiple challenges; therefore, preparation and flexibility are key success factors in this patient population.

**Logistical Challenges** — The operating room and perioperative areas should be prepared to accommodate and transport morbidly obese patients. Physicians and hospital staff will need to familiarize themselves with “high-capacity” operating room and critical care beds that are capable of accommodating patients with BMIs greater than 35.

In addition, the transfer of patients from bed to bed may be facilitated by the use of inflatable “hover mats” and/or “hoya lifts” that allow the patient to be moved easily. Although standard anesthesia equipment can be used during the care of bariatric patients, additional large blood pressure cuffs may be necessary.

**Monitors** — In addition to the routine and standard monitors employed for patients undergoing abdominal surgery, it is prudent to utilize several additional monitors during bariatric surgery. All patients undergoing gastric bypass surgery should have a urinary catheter placed so that urine output can be quantified closely. In addition, the occurrence of intraoperative “awareness” is significantly increased in the morbidly obese

patient as the pharmacokinetic and pharmacodynamic effects of agents are often unpredictable. In that regard, use of a bispectral index monitor is recommended as an additional monitor that may allow the anesthesiologist the ability to ascertain intraoperative awareness. Invasive monitoring — such as arterial catheterization, central venous or pulmonary artery catheterization — is useful when medically indicated but is not necessarily required when caring for the bariatric population.

**Airway Support** — Due to the potential inability to ventilate or intubate the morbidly obese patient, the anesthesiologist and critical care physician should be prepared adequately for this scenario. With regard to the need for specialized ventilators, standard anesthesia machine ventilators are adequate in controlling ventilation and do not require any supplemental mechanical devices to en-

sure adequate ventilation during the surgical procedure. However, ventilators in the postanesthesia care unit (PACU) and intensive care unit (ICU) will need to be evaluated for their ability to accommodate obese patients.

**Hypothermia** — Morbidly obese patients undergoing bariatric procedures are especially vulnerable to intraoperative hypothermia since the presence of large body surface area coupled with the intraoperative exposure of intra-abdominal contents allows for rapid body cooling. Preventive measures such as increasing the ambient room temperature, warming of intravenous fluids and utilization of forced-air warming devices are mandatory to minimize the occurrence of hypothermia.

**Complications** — Patients undergoing bariatric surgery are at an increased risk of morbidity and mortality secondary to underlying disease states as well as the complexity of the surgical procedure. Dehiscence of the gastric bypass and/or the occurrence of an esophageal perforation may lead to sepsis. In addition, morbidly obese patients may sustain cardiac injury, transient renal failure and/or pulmonary complications. It is imperative that a team approach be utilized when managing this patient population so that all major organ systems are optimally assessed.

**PACU vs. ICU** — The most obvious concerns facing every anesthesiologist and critical care anesthesiologist at the end of a bariatric procedure are the questions of timing of extubation, the need for prolonged ventilation and/or the need for bypassing the postanesthesia care unit (PACU) for direct admission to the ICU. Generally speaking, the vast majority of morbidly obese patients can be extubated at the end of surgery; indications and guidelines for extubation are similar to those for nonmorbidly obese patients. One should avoid using morbid obesity as the sole indication for delaying extubation in the operating room or as an indication for admission to the ICU.

There is a small subset of patients who may require prolonged intubation and direct admission to the intensive care unit. Patients requiring prolonged intubation include those

*Continued on page 8*

## Critical Challenges for Patients Undergoing Bariatric Surgery

Continued from page 7

patients who have a history of severe sleep apnea or a documented history of difficult intubation. These patients should be fully recovered and awake prior to extubation. In addition, when bariatric patients with such histories are to be extubated, it may be prudent for an anesthesiologist to be notified that such a patient has been extubated in the event that the patient requires reintubation.

Patients with complex co-existing medical disease states that required invasive monitors such as an arterial catheter and/or pulmonary artery catheter should be brought directly to the ICU so that intensive monitoring may continue. In addition, patients with pulmonary hypertension, uncontrolled hypertension and new onset electrocardiographic changes also warrant a direct admission to the ICU along with consultation of appropriate specialists.

As a result of the increasing need for the definitive treatment of morbid obesity over the past 40 years, the development of procedures to promote weight loss has been refined. The evolution of surgical modalities for the treatment of morbid obesity will likely continue during the next decade. As a result, anesthesiologists will likely find themselves managing the bariatric patient. Due to the complexity of bariatric procedures as well as

the unique challenges in managing this population, it is imperative that anesthesiologists and critical care physicians familiarize them-

***The evolution of surgical modalities for the treatment of morbid obesity will likely continue during the next decade. As a result, anesthesiologists will likely find themselves managing the bariatric patient.***

selves with this patient population so that optimal anesthesia care can be delivered. The care of the morbidly obese patient requires preparation, diligence and vigilance; however, as with all new and developing fields in medicine, the critical care anesthesiologist

will be greatly rewarded in this new arena.

### References:

1. Kral JG. Overview of surgical techniques for treating obesity. *Am J Clin Nutr.* 1992; 55:552S-555S.
2. Pi-Sunyer FX. Short-term medical benefits and adverse effects of weight loss. *Ann Intern Med.* 1993; 119:722-726.
3. Shikora SA, Benotti PN, Forse RA. Surgical treatment of obesity. In: Blackburn GS, Kanders BS, eds. *Obesity Pathophysiology, Psychology and Treatment.* New York: Chapman and Hall; 1994:264-282.
4. Kolanowski J. Surgical treatment for morbid obesity. *Brit Med Bull.* 1997; 53:433-44.
5. National Institutes of Health Consensus Development Conference Statement. Health Implications of Obesity. *Ann Int Med.* 1985; 103:1073-1077.
6. National Institutes of Health Consensus Development Conference Panel. Gastrointestinal surgery for severe obesity. *Ann Intern Med.* 1991; 115:956-961. ♦

## President's Term Expanded to Two Years

Members attending the Membership Business Meeting immediately following the ASCCA 2002 Annual Meeting in Orlando, Florida, approved an amendment to the Society's Bylaws that expands the term of the ASCCA President from one to two years, beginning immediately. The Board of Directors recom-

mended the change to the Bylaws upon the recommendation by the Past Presidents Council that a two-year presidential term would provide for more effective leadership by the president. The ASCCA President-Elect will also serve a two-year term as will the Immediate Past President. ♦

---

## ***ASA Delegate Update***

### ***House of Delegates Makes Definitive Statements for 2003***

*By Vincent L. Hoellerich, M.D.  
Delegate to ASA*

The 2002 American Society of Anesthesiologists (ASA) House of Delegates convened on October 13 and 16, 2002. This year, a few items of interest to ASCCA members were addressed:

**1. Incoming ASA President James E. Cottrell, M.D., proposed a new name for ASA: "American Society of Anesthesiology, Critical Care and Pain Medicine."**

Although it is uncertain whether this proposal will ever materialize, ASCCA strongly supports Dr. Cottrell's vision that critical care medicine should remain and be promoted as an essential component of anesthesiology training and practice.

**2. A Task Force on Strategic Public Outreach was created.**

This group, which includes ASCCA's Immediate Past President, Neal H. Cohen, M.D., is expected to identify objectives for raising public awareness about the role of anesthesiologists both inside and outside the operating room.

**3. Revised "Guidelines for Pulmonary Artery Catheterization" were approved.**

These guidelines include an approach to assessing the appropriateness of pulmonary artery catheters in surgical patients based on three factors: 1) patient risk, 2) surgical risk and 3) practice setting characteristics. The guidelines are available through ASA.<sup>1</sup>

**4. A proposal to increase support for perioperative and critical care medicine in a better defined four-year continuum of residency education was rejected.**

An ASA Task Force on Graduate Medical Education had been charged with evaluating new ways to modify anesthesiology residencies to include more perioperative medicine experience. This work was assigned in response to a resolution presented at last year's House of Delegates by Stephan R. Thilen, M.D.

Of all items discussed in Reference Committees at this year's House of Delegates, this item received the most passionate and prolonged testimony. In the end, the Reference Committee recommended to the House that the American Board of Anesthesiology and the Society of Academic Anesthesiology Chairs/Association of Anesthesiology Program Directors, as well as the Residency Review Committee (but not ASA), should work together to consider all options. The House approved this action.

**5. A "Statement on the Role of Registered Nurses in the Management of Continuous Regional Analgesia" was approved.**

This statement supports the role of registered nurses, qualified by education, experience and credentials, to participate in the management of these analgesic modalities in postoperative pain management, chronic pain management and obstetric analgesia services. Furthermore, the statement suggests that should registered nurse involvement be in some way prohibited, pain relief for these patients will be radically impaired and, in some settings, effective pain management using these techniques will be impossible.



*Vincent L. Hoellerich, M.D.*

I wish to acknowledge all of the support that I have received this past year from our ASCCA officers, directors and members. I thank Gary W. Hoormann for his administrative assistance, and I welcome Dr. Thilen as the new Alternate Delegate to ASA.

As a result of the efforts of many, ASCCA continues to make progress in improving the visibility and input of critical care anesthesiologists within ASA, and I believe ASA is listening better than ever before.

**Reference:**

1. ASA Practice Guidelines for Pulmonary Artery Catheterization. *Anesthesiology*. 1993; 78:380-394. ◆

---

*The American Society of Critical Care Anesthesiologists acknowledges the following corporations in appreciation of their support of the Society's general mission:*

**Platinum Supporters**

Abbott Laboratories  
Eli Lilly and Company  
Ortho Biotech Products

**Donor Supporters**

Baxter Healthcare Corp.  
Imagyn Medical Technologies

## Executive Committee Report

The Executive Committee consists of **President** Clifford S. Deutschman, M.D., **President-Elect** Michael J. Breslow, M.D., **Immediate Past President** Neal H. Cohen, M.D., **Secretary** Gerald A. Maccioli, M.D., and **Treasurer** Steven O. Heard, M.D.

Prior to the ASCCA Annual Meeting last October, Robert N. Sladen, M.B., Ch.B., was Immediate Past-President. In our deliberations prior to and at the ASCCA Annual Meeting, we have come to a number of conclusions.

ASCCA needs to streamline and redefine its purpose as an organization. We have lost our focus and with it our ability to meet the needs of our membership. The net result is that our accomplishments are not as robust as they should be, and our membership is declining.

As a result of declining membership, the recent turn of events in the stock market and new rules governing corporate donations to organizations such as ours, we face a significant (but not insurmountable) finan-

cial challenge. These issues were brought to the attention of the Board prior to the Annual Meeting.

As a result, two important steps were taken. First, to improve the continuity of leadership, the Board unanimously approved a recommendation by Dr. Sladen that the terms served by each member of the executive committee be extended to two years.

Second, the Task Force on Strategic Planning was formed and charged to examine the mission and goals of ASCCA and how best to accomplish our aims. This task force consists of Board members Dr. Deutschman, Michael J. Breslow, M.D., Todd Dorman, M.D., and Gerald A. Maccioli, M.D. We have met at the meeting and by e-mail and have arrived at a tentative set of new goals.

We will share the results of our deliberations in the next issue of the *ASCCA Interchange*. ❖

## ASCCA 15th Annual Meeting

### ASCCA 2002 Annual Meeting: Hard Science and Hot Topics

*Continued from page 5*

Milano, Italy, led off the sessions with a talk on the consequences of increased intra-abdominal pressure during acute respiratory failure.

**Hermann Wrigge, M.D.**, University of Bonn, Germany, shared with the audience his experience with airway pressure release ventilation (APRV) in patients with acute respiratory distress syndrome (ARDS). He commented on the advantage of allowing patients to breath spontaneously with APRV, as opposed to pressure control ventilation, and the benefits of early spontaneous ventilation in this condition. He demonstrated a higher PaO<sub>2</sub>/FiO<sub>2</sub> ratio as well as better levels of SV0<sub>2</sub> when patients were allowed to breath spontaneously by using this mode of ventilation.

Michael F. Haney, M.D., completed the International Session with his presentation, "Life of a Scientist/Researcher in Sweden." Dr. Haney, an American, has lived several years in Umea, Sweden, and talked about the practice of academic medicine in that country. The audience was fascinated to learn about the concept of "developing clinical re-

searchers." The universities he mentioned are autonomous institutes that establish programs which allow clinicians to become serious researchers. He explained how a researcher completes a training program, which would begin with the selection of a mentor. The decision to enter a training program would most likely be influenced by the local economic climate, but the departments of the university offer incentives to promote investigation. He commented on the differences of the two models in training a mature researcher who combines clinical and research training. One concept was referred to as the "late bloomer" — the clinician who becomes a formal researcher as an attending physician — as opposed to the "first-science-then-medicine" style of those who complete residency at a later age.

The scientific program of this year's meeting was closed by the delayed Lifetime Achievement Award Lecture by Dr. Gattitoni, who could not attend our meeting last year. It was truly delightful to listen to Dr. Gattitoni's experiences from his early years as a trainee all the way up to his years of clinical and research practice, some of which took place in

the United States. He spoke about times when ARDS concepts were first being developed, and he depicted chest X-rays of patients with bilateral chest tubes for pneumothoraces, which were very common. It also was interesting to hear him discuss the origin of the term "Baby Lung." He narrated how CT scan technology, once available to clinical practice, allowed better understanding of the pathophysiology of ARDS. He let us know about his attempts at treating patients with prone positions and the applications of low-frequency positive-pressure ventilation and extracorporeal membrane carbon dioxide removal. Interestingly, Dr. Gattitoni commented that he still firmly believes that ECCO<sub>2</sub>R plays a role in the treatment of ARDS.

Overall, the presentation of information at the ASCCA was well-organized, applicable to patient care and contemporary. Next year, the meeting will be held in San Francisco, California, and attendance by anesthesiologists/intensivists is certainly important in maintaining up-to-date clinical information, Society information and professional contacts. We encourage all members of the ASCCA to plan to attend this meeting. ❖

## New Year's Resolution: Positive Changes for 2003

Continued from page 1

meaningful ICU experience and appropriate role model intensivists. As a result, the number of residents entering critical care fellowships has plateaued. Practitioners in the private sector have participated in an escalation of salaries that is not sustainable. The demand from private groups for fellowship training of any kind before entering practice has declined. Academic departments, faced with an increasing demand for operating room (O.R.)-related services have begun to abandon the ICU. The current level of reimbursement for O.R. anesthesia cannot last, and threats from nurse anesthesia, reduced Medicare/Medicaid reimbursement and less lucrative third-party payments are real, and income must go down.

Academic and private practice groups have not recognized the immediate and long-term benefits of embracing critical care as part of their practice. Our specialty suffers from an inferiority complex that we have helped to create. We are not viewed with respect by practitioners in other specialties, and this is reflected in the attitude of our colleagues with regard to nurse anesthesia. There is no hue and cry to defend us. Embracing critical care medicine and adding the services offered by intensivists to all anesthesia practice groups will make us more visible to the medical community and increase our value in the eyes of our colleagues and patients. We will not need to stoop to reminding people that "the practice of anesthesiology is the practice of medicine" — it will be obvious to all. An additional revenue stream will be open, one that increased demand is likely to make very attractive. We will become more like our colleagues in other countries, where anesthesiology is viewed as far more important than, say, gynecology or pediatrics.

ASCCA must share some of the blame for our specialty's inability thus far to rise to the occasion. We have not been adequate advocates for the role of critical care medicine within the scope of anesthesiology, despite the efforts of an extremely dedicated group of individuals. These people have argued vociferously, presented superb educational symposia, involved themselves in academic and American Society of Anesthesiologists politics and attempted to provide role models for future practitioners. Somehow, this has not been sufficient. Our

### ASCCA Task Force on ICU Manpower

Recent changes in job availability, reimbursement levels and prestige of intensivists within the hospital community have made critical care a more desirable career choice than ever before. Unfortunately, few medical students and physicians are aware of these opportunities. Because of this, ASCCA has formed a Task Force on ICU Manpower in an attempt to disseminate information regarding critical care's importance and stature in medicine and the bountiful career opportunities available in the subspecialty.

To accomplish this mission, the task force intends to:

- Solicit a speaking opportunity at the 2003 Annual Meeting of the Society of Academic Anesthesiology Chairs
- Submit an article to a high-profile general medicine journal (e.g., *New England Journal of Medicine*) that addresses how recent prioritization of patient safety issues by payers and the general public has altered the practice of critical care medicine
- Develop a strategy to augment critical care education for medical students

Members of the Task Force on ICU Manpower are:

<b>Michael J. Breslow, M.D.</b> , Chair Lutherville, Maryland	<b>William E. Hurford, M.D.</b> Boston, Massachusetts
<b>Charles G. Durbin, Jr., M.D.</b> Charlottesville, Virginia	<b>Gerald A. Maccioli, M.D.</b> Raleigh, North Carolina

membership has declined as the number of fellows has declined, and our message is not getting through. Rather than view our efforts as futile, I am inclined to think that they are misdirected. We must rethink our mission and approach.

Prior to the ASCCA 2002 Annual Meeting, the Board of Directors discussed these issues. We have decided to re-evaluate what we are trying to achieve and how we should go about achieving it. A task force was formed to come up with a plan for consideration by the Board. This group consists of myself, President-Elect Michael J. Breslow, M.D. and two especially energetic, innovative and outspoken Board members, Todd Dorman, M.D., and Gerald A. Maccioli, M.D. Our task is large: re-examination of the mission, restructuring of the Society

and its committees and implementation of a better plan. We are working on a tight timetable, but despite extremely busy schedules, we are committed to having a first draft for the Board by January 1, 2003. We hope to come up with an approach that is comprehensive and aimed at both private practice and academic anesthesiologists since we believe opportunities and threats exist for both. I welcome any ideas from members. Please contact me via e-mail <deutschcl@uphs.upenn.edu> at any time. By the next installment of this newsletter, a plan should be in place. Watch this space. ♦



**ASCCA**

AMERICAN SOCIETY OF  
**CRITICAL CARE  
ANESTHESIOLOGISTS**

520 N. Northwest Highway  
Park Ridge, IL 60068-2573

Non-Profit Org.  
U.S. POSTAGE  
**PAID**  
Permit No. 70  
Palatine P&DC

**Officers**

**President**

Clifford S. Deutschman, M.D.  
Philadelphia, Pennsylvania

**Immediate Past President**

Neal H. Cohen, M.D.  
San Francisco, California

**President-Elect**

Michael J. Breslow, M.D.  
Baltimore, Maryland

**Secretary**

Gerald A. Maccioli, M.D.  
Raleigh, North Carolina

**Treasurer**

Steven O. Heard, M.D.  
Worcester, Massachusetts

**Directors**

Jeffrey R. Balsler, M.D., Ph.D.  
Nashville, Tennessee

Eugene Y. Cheng, M.D.  
Milwaukee, Wisconsin

Todd Dorman, M.D.  
Baltimore, Maryland

Brian S. Kaufman, M.D.  
New York, New York

Heidi B. Kummer, M.D., Ph.D.  
Burlington, Massachusetts

Richard C. Prielipp, M.D.  
Winston-Salem, North Carolina

**Committee Chairs**

**Bylaws**

David T. Porembka, M.D.  
Cincinnati, Ohio

**Communications**

Todd Dorman, M.D.  
Baltimore, Maryland

**Critical Care Practice**

Aryeh Shander, M.D.  
Demarest, New Jersey

**Critical Care Training**

William E. Hurford, M.D.  
Boston, Massachusetts

**Development**

Robert N. Sladen, M.B., Ch.B.  
New York, New York

**Education**

Christopher C. Young, M.D.  
Durham, North Carolina

**Executive**

Neal H. Cohen, M.D.  
San Francisco, California

**Finance**

Steven O. Heard, M.D.  
Worcester, Massachusetts

**International Liaison**

Heidi B. Kummer, M.D.  
Burlington, Massachusetts

**Membership**

Eugene Y. Cheng, M.D.  
Milwaukee, Wisconsin

**Nominating**

Robert N. Sladen, M.B., Ch.B.  
New York, New York

**Research Awards**

Jeffrey R. Balsler, M.D., Ph.D.  
Nashville, Tennessee

**Ex-officiis**

**ASA Delegate**

Vincent L. Hoellerich, M.D.  
Raleigh, North Carolina

**ASA Alternate Delegate**

Stephan R. Thilen, M.D.  
Madison, Wisconsin

## Awaiting Renaissance

*Continued from page 2*

applications are TNTC (too-numerous-to-count), and academic productivity is returning. The change in mental attitude among departmental members is outstanding. I also wait for the reawakening to occur in my little subspecialty niche, and I am hopeful that this enthusiasm will slowly infect all of anesthesiology so that critical care medicine once again becomes a sought-after subspecialty fellowship.

However, my enthusiasm is tempered with cautious optimism. Why? I cannot answer this question with certainty, but I know that my caution is rooted in a new world of anesthesiology where procedures and quick turnover times in the operating room are

what make money, not intellectual discussions with residents about appropriate therapy for the treatment of bacterial meningitis or the ventilatory mechanics of a spinal cord injury patient. Instead, we have become a medical specialty machine focused on issues such as reimbursement and medical malpractice liability instead of critical care. This is not meant to blame the system, but instead, it is meant to illustrate that we cannot lose sight of the strength that lies in the diversity of our specialty. As anesthesiologists, intensivists and pain medicine specialists, it is time to utilize the diversity in our training instead of balkanizing it.

ASA President James E. Cottrell, M.D., has advocated an evaluation of the structure of our Society and its relationship with its

subspecialties. Perhaps this is an opportunity that we should seize, one that will allow our subspecialty to grow in ways that we would not have thought possible with our current membership and resources. However, such an opportunity can only come to fruition with the dedication of our ASCCA members. ASCCA President Clifford S. Deutschman, M.D., has appointed a task force (see box on page 11) within ASCCA to investigate our mission as a subspecialty society and our approach to accomplishing its goals. I hope that all of you will lend your support and ideas to these individuals and share your opinions. We must be directed and focused if our subspecialty is to survive.

We await its renaissance. ❖