

October 2006

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29TH ANNUAL MEETING ABSTRACT DEADLINE: NOVEMBER 3, 2006

Abstracts for the 29th Annual Meeting, April 21 - 25, 2007 at the Palais des congrès de Montréal, Montreal, Quebec, Canada will be submitted online through the SCA Website at www.scahq.org. The abstract submission site is open and will close at 4:00 pm (EST) on November 3, 2006.

No paper or disk submissions will be accepted.

www.scahq.org

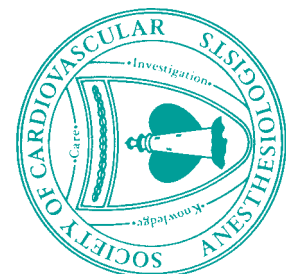
Society of Cardiovascular Anesthesiologists

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Society of Cardiovascular Anesthesiologists

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What's Online (www.scahq.org)

October 2006 Newsletter

- Calendar of Future Meetings (Web Only)

- SCA Breakfast Panel at the ASA Annual Meeting

- Special Message from Steven Shafer, MD, Editor in Chief, *Anesthesia & Analgesia*

- Special Article:
 - The American Heart Association's Council on Cardiovascular Surgery and Anesthesia

- Pro & Con:
 - A closed model on intensive care leads to a superior outcome in critical surgical patients

- Literature Review
 - Cognitive Outcomes in Elderly High-Risk Patients After Off-Pump Versus Conventional Coronary Artery Bypass Grafting; A Randomized Trial.

- Order the SCA Echo DVD Monograph online

- Password Protected Area for Members

- Acknowledgement of Industry Support

- Fellowship Listings

- *Anesthesia & Analgesia* Link (official journal of the SCA)

- Job Postings

Call for Nominations

Dr. Glenn Gravlee, Chair of the Nominating Committee, has announced that nominations are being sought for the following positions:

- President-Elect – 2-year term
- Secretary/Treasurer – 2-year term
- Board of Directors (2 positions) – 3-year term
- Nominating Committee member (2 positions) – 2-year term
- Continuing Education Committee (CME) member (2 positions) – 2-year term


The deadline for nominations is January 8, 2007. The slate of candidates for Board of Directors, Nominating Committee members and CME Committee members will appear on SCA's website (www.scahq.org). Eligible SCA members will have 45 days to cast their online votes. The slate of candidates for President-Elect and Secretary/Treasurer will appear in the SCA Newsletter with elections taking place at the Annual Business Meeting in Montreal, April 23, 2007.


10th Annual Comprehensive Review
& Update of Perioperative Echo


Clinical Decision Making in the Cardiac Surgery Patient

BASIC	ADVANCED
February 5 – 7, 2007	February 8 – 10, 2007

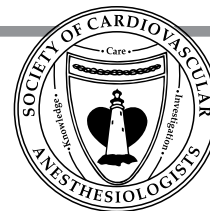
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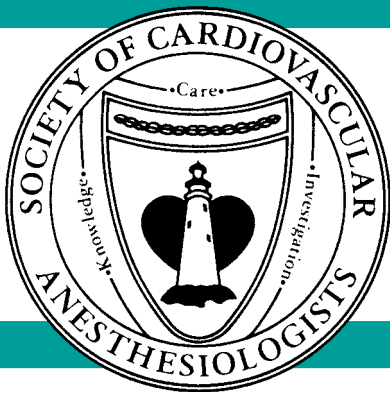
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New Member Benefit

Beginning with your 2007 member dues, the Society can now send one comprehensive renewal notice to include all the SCA members in your practice or institution as one "group". Contact Joye Stewart, Membership Coordinator, no later than November 30 to establish "group" billing for your 2007 member dues.



NEWSLETTER

2209 Dickens Road • Richmond, VA 23230-2005 • (804)282-0084 • sca@societyhq.com

October 2006

Special Message

SCA and *Anesthesia & Analgesia*: A history and future of innovation

For this newsletter, as a departure from the usual “President’s Message,” I asked Steve Shafer to outline his vision for *Anesthesia & Analgesia* for the SCA membership. I know you will find our new editor-in-chief’s comments inspirational, and will look forward to the continued development and enhancement of our journal, not only for SCA members, but for anesthesiologists worldwide.

— James G. Ramsay, MD
SCA President, 2005-2007

Steven L. Shafer, MD

Professor of Anesthesia, Stanford University
Editor-in-Chief, *Anesthesia & Analgesia*

When Ron Miller assumed the position of Editor-in-Chief of *Anesthesia & Analgesia* in 1991, he had a vision for creating “journals within a journal.” Dr. Miller’s vision required a partner, an organization willing to take risks with a new model for publication and strategic growth. That partner was the Society of Cardiovascular Anesthesiologists, which adopted *Anesthesia & Analgesia* as its official journal in 1994.

As Roger Moore articulated in February 2003 (<http://www.scahq.org/sca3/newsletters/2003feb/pres.shtml>), a core value of the SCA is to “provide new information on advances in cardiac, pulmonary and vascular anesthesia to all anesthesiologists.” *Anesthesia & Analgesia* shares this core value, although we might rewrite it as “provide new information on advances in anesthesiology and perioperative medicine to all anesthesiologists.” However, the purpose of the Journal goes well beyond providing new information. The Journal can serve as a catalyst for research, a forum for debating controversial clinical issues, and a voice of reason amidst the cacophony of competing interests.

Since 2003, the Society of Cardiovascular Anesthesiologists has contributed two members to our Editorial Board: an Associate Editor-in-Chief for Cardiovascular Anesthesia (Dr. Ken Tuman prior to April 2006), and an Assistant to the Associate Editor-in-Chief (Dr. Charles Hogue prior to April 2006). Under their leadership, *Anesthesia & Analgesia* adopted many of the innovations found in the SCA newsletter, including Pro/Con editorials, commissioned reviews, Echo Rounds, and case conferences. Dr. Tuman recently completed his term on the editorial board, and we owe him an enormous “Thank You” for leadership that has made the SCA our flagship affiliation.

The SCA elected Dr. Charles Hogue as the new Associate Editor-in-Chief for Cardiovascular Anesthesia, and Dr. Marty London as Dr. Hogue’s replacement for the “Assistant to the Associate” position. Dr. London inaugurated the position by redefining it, and he is now the Section Editor for Cardiovascular and Thoracic Education.

Drs. Hogue and London are bringing more innovation and intellectual content to the Cardiovascular Anesthesia section of the Journal. They are aggressively recruiting Pro/Con debates on important clinical controver-

sies, such as our recent editorials on aprotinin and perioperative beta blockers. They have commissioned high quality reviews on both established and emerging clinical topics. They have made Echo Rounds a vital part of the Journal. They have worked to make the Journal the conduit for publishing clinical and practice guidelines developed by the SCA. Dr. London has also taken responsibility for ensuring that our new CME program (to be announced in an upcoming editorial in *Anesthesia & Analgesia*) features at least one article every month of interest to SCA members, including echo specific CME usable for certification.

Drs. Hogue and London have expedited the review process and improved the quality of feedback to authors. They use the review process to provide positive and useful critiques about the research question, hypotheses, study design, and manuscript organization and style. SCA members who submit their papers to *Anesthesia & Analgesia* will find the process respectful, educational, and rigorous. On a related note, I’d like to express my gratitude to the many members of the SCA who serve as reviewers for *Anesthesia & Analgesia*.

Ongoing innovations at *Anesthesia & Analgesia* go well beyond the redesigned cover. In the past year we have:

- Created a more rigorous Journal (only a third of submitted manuscripts are eventually accepted for publication, and case reports must be truly exceptional to be considered for publication)
- Expanded our Editorial Board, adding intellectual and geographic diversity (including increased expertise in cardiovascular anesthesia)
- Added a new section, Pain Mechanisms
- Collected Pain Medicine, Pain Mechanisms and Regional Anesthesia into a cohesive new pain section, called Analgesia
- Revised and expanded our online Journal (www.anesthesia-analgesia.org), which has been set up to permit other journals to create specialized home pages for their content
- Expanded the Chinese Language Edition (now one of the most widely read anesthesia journals in Asia)
- Expanded the correspondence section, sharply editing letters to enhance their focus, under the editorial leadership of Dr. Lawrence Saidman
- Recruited internationally recognized experts as Section Editors for Economics, Education, and Policy (Dr. Franklin Dexter), Neurosurgical



Dr. Shafer

Continued on page 4



The American Heart Association's Council on Cardiovascular Surgery and Anesthesia

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Chair, AHA's Council on Cardiovascular Surgery and Anesthesia

The American Heart Association (AHA) is the largest volunteer and charitable organization whose mission is to reduce death and disability from cardiovascular diseases and stroke. In 2000, the AHA established a strategic goal of reducing death, disability, and risk by 25% by the year 2010. Most people are familiar with the local fund raising efforts of the AHA in terms of heart walks or mini-marathons, school activities such as "Jump Rope for Heart", heart galas and auctions, mailing campaigns, and the more recent "Go Red For Women" programs. The average donation received by the AHA is less than \$25. However, the success of the combined fund-raising programs permits support of four major areas from a scientific and health care standpoint:

1. Scientific research funding from AHA national and AHA regional affiliates (\$142 million in 2005) is largely targeted toward young investigators and early career research support. Funding distribution was 68% basic research, 26% clinical research and 6% population research.
2. Public health education (\$216 million in 2005) is directed toward increasing public awareness of cardiovascular disease and stroke risk reduction and treatment options. This includes lay press information, web-based learning tools, educational pamphlets often used in hospitals and physician's offices, community presentations and speakers.
3. Professional education and training (\$72 million in 2005) includes scientific conferences, development of scientific statements and evidence-based practice guidelines, scientific journals and web-based learning tools.
4. Community services (\$44 million in 2005) efforts provide information and services to underserved and high risk populations.

The AHA's Council on Cardiovascular Surgery and Anesthesia is one of 13 Scientific Councils. Our mission is to improve the application of established surgical procedures and anesthetic techniques, increase awareness of new issues in the field of cardiovascular surgery and anesthesia, and disseminate new knowledge to increase the number of patients who may benefit from surgical treatment in safer and more effective ways.

Our Council is committed to supporting young investigators. We provide funding for the AHA's Student Scholarships in Cardiovascular Disease and Stroke. We sponsor the Vivien Thomas Young Investigator Awards competition which provides travel stipends and financial awards to those finalists who are chosen to present their work at the annual Scientific Sessions. Earlier this year, we provided a rationale to the NHLBI regarding the importance of the relative time for research versus clinical commitments for our specialties for whom clinical and technical skills are paramount. We were joined in this effort by the Society of Thoracic Surgeons, the American Association for Thoracic Surgery, and the Thoracic Surgery Foundation for Research and Education. We recently received notice that the NHLBI has agreed to reduce the research time percentage from 75% to "50-75%" for clinically-oriented specialists to apply for K08 and K23 training grants.

Membership in our Council has the following benefits:

- Online access to the AHA's scientific journals including *Circulation*, *Stroke*, *Circulation Research* as well as reduced subscription fees
- Reduced registration fees to AHA-sponsored scientific conferences and meetings including the annual Scientific Sessions
- Early registration opportunities for Scientific Sessions

Continued on page 5

Special Message, from page 3

Anesthesia (Dr. Adrian Gelb), Technology, Computing, and Simulation (Dr. Jeffrey Feldman), Pain Mechanisms (Dr. Tony Yaksh), and Pain Medicine (Dr. Spencer Liu)

- Added three specialized editors: Dr. Keith Gregg, Statistical Editor; Dr. Jeffrey Gross, CME Editor; and Dr. Paul White, special projects editor (stay tuned: the details will be announced in an upcoming Editorial in the Journal)
- Created a far more detailed (and hopefully more helpful) Guide for Authors.

These innovations were undertaken with a single goal: is to improve the care of our patients. Who benefits from scientific discoveries in our specialty? Who benefits from better education of anesthesiologists? Who benefits from our exploring both sides of clinical controversies? Our patients benefit from these efforts. It is for our patients that we strive to do the best we can in the day-to-day work of creating a monthly Journal, and it is for our patients that the Journal continues to innovate to promote research, education, and continue advancing patient care.



A closed model on intensive care leads to a superior outcome in critical surgical patients

PRO:

The intensive care units (ICUs) must be used in the most efficient way, as they usually are the most expensive part in the hospital. High quality and cost effective performance can best be achieved when responsibility and management are given to those who have the special expertise.

Who has special expertise?

The acute, life threatening challenges in critical care are most often complex deteriorations wherein many special problems converge and amplify each other, such as in severe sepsis, acute renal failure, hemodynamic shock and many others. Competent critical care of such complex deteriorations needs expertise which goes far beyond the knowledge and skills of one general specialty. Physicians with special expertise, educated and certified for critical care medicine (i.e. "intensivists") are the experts for these problems¹.

In larger European hospitals, intensive care units (ICUs) are generally run as so-called "closed" units operating as functional entities with a competent on-site team (specialized physicians and nurses) under direct supervision of a full-time intensivist who is directly responsible for the treatment. Competent physicians maintain the service on-site around the clock. Internal management is well organized ("team model") including implementation of quality improvement and education.

In this context, we are only considering ICUs in larger hospitals. In smaller hospitals the needs and the conditions are different.

The essentials of critical care

Critical care medicine is a highly proactive acute medicine. Today, there is good evidence that acute and timely effective reaction is mandatory for optimal outcome. The study of Rivers and co-workers² shows impressively that early goal-directed therapy (optimal adjustment of cardiac function and oxygen delivery within the first six hours) is significantly more effective in treating severe sepsis.

Another analysis of organ dysfunction data includes 1036 patients from the placebo arms of two large controlled sepsis trials³. Sequential Organ



*Hilmar Burchardi, MD
University of
Goettingen, Germany*



*Gregory E. Kerr, MD, MBA
Weill Medical College
of Cornell University,
New York, NY*

CON:

Many articles have been published over the last few years that demonstrate support and/or advocate the implementation of the "closed" unit as the model of choice for management of an intensive care unit (ICU). Indeed, the arguments are very strong and seemingly convincing. From all that we have been told, the closed model seems to be superior to an open model. Yet, another commonly used model, the semi-closed model, has received very little attention. Certainly, at the current time, there is an insufficient number of intensivists available to

allow for the implementation of closed units in all hospitals in the U.S. In 1997, only 36.8% of all ICU patients in this country had care provided to them by an intensivist¹. So the possibility that most ICUs will be able to provide a closed model does not exist in the foreseeable future. Regardless, it is time that the semi-closed model get evaluated a bit more closely since there are compelling reasons as to why this model, at times, may be preferred over the closed model.

For the purpose of this discussion, a semi-closed ICU is defined as one in which a critical care team provides direct patient care, but in collaboration with other "privileged" physicians who are also allowed to write orders. In a closed unit, members of the critical care team are the only clinicians allowed to have direct patient care and also write orders. Semi-closed models frequently exist in ICUs where there is a small number of primary physicians who are not part of the ICU team per se but desire to remain actively involved in their patients' care. Many surgical and cardiothoracic ICUs maintain this model.

In an effort to understand why a semi-closed unit may be preferred over a closed unit, it is necessary to understand what components of the closed model make it preferable to an open model. By doing this, we can then see how such goals can be attained in the semi-closed unit. We also need to understand other organizational and staffing patterns that exist outside

Pro & Con continued on page 6

Council on Cardiovascular Surgery and Anesthesia, from page 4

- Access to the online Council membership directory
- Opportunities to serve on AHA and Council committees. This includes opportunities to serve on writing groups for AHA scientific statements, science advisories, practice guidelines; program committees for scientific conferences
- The quarterly Council Connections newsletter

Our Council sponsors the Surgical Supplement to *Circulation* which contains peer-reviewed papers presented at Council sponsored sessions at the annual Scientific Sessions. Abstract presenters at Council-sponsored sessions may submit papers for review.

Over 400,000 patients have cardiac and vascular surgery each year. The daily interactions of cardiac and vascular surgeons and cardiovascular

anesthesiologists are a natural starting point for our Council to develop new programs and enhance existing ones.

Thanks to your Society's leadership for the opportunity to place our Council's message before you in this newsletter. Please feel free to contact your Society's representatives to our Council's Leadership Committee (Christina Mora Mangano, cmoraman@stanford.edu and Jerrold Levy, jerrold.levy@emoryhealthcare.org) or me (lfhcvt@aol.com) regarding the value of membership and participation in our Council. More information regarding the American Heart Association and our Council can be found at www.americanheart.org and the Society of Cardiovascular Anesthesiologists website.

Failure Scores (SOFA) were analysed daily: Improvement of cardiovascular, respiratory, or renal function within the first 24 hours reduced the 28-day mortality significantly. This shows convincingly that a fast, effective reaction is mandatory for good outcome.

The advantage of intensivists

Critical care medicine can be more efficient, when experts especially competent for critical care (i.e. “intensivists”) are involved in the treatment⁴⁻¹⁰. Only two references shall be mentioned in detail:

The Maryland Health Services Cost Review Commission analysed the effect of having daily rounds by ICU physicians on clinical and economic outcomes after esophageal resection in 35 non-federal acute care hospitals¹¹. During the study period (1994-1998), 366 adult patients underwent esophageal resection. After adjusting for patient case-mix, the lack of daily rounds by an ICU physician was independently associated with a 73% increase in hospital length of stay and a 61% increase in total hospital cost. Furthermore, postoperative complications occurred more frequently. So, at least for high-risk surgical procedures, the participation of ICU expert physicians improves the quality of care and reduces costs.

By a meta-analysis from MEDLINE and EMBASE (1965 – 2001), Pronovost and co-workers¹² looked for the association between the ICU physician staffing and patient outcomes. In 26 relevant observational studies, they found that high-intensity ICU staffing, i.e. mandatory intensivists consultation or closed ICU (all care directed by intensivists), was associated with lower hospital mortality (in 16 from 17 studies, risk adjusted), lower ICU mortality (in 14 from 15 studies, risk adjusted), shorter hospital length of stay (LOS) (in 10 from 13 studies), and ICU LOS (in 14 from 18 studies), as compared to low-intensity ICU staffing (i.e. no intensivist consultation).

Timely action by the ICU team

Unstable critically ill patients may deteriorate very quickly, requiring constant surveillance and continuous titration of therapy. Good critical care is continuously capable of acting. This cannot be realized by regular rounds when physicians see their patients only intermittently. Communication problems may be crucial in such situations. Therefore, critical care must be provided by physicians who thoroughly know the actual problems of their patients, that means by physicians who are present in the ICU, continuously dedicated to critical care and not responsible for any other service in the hospital¹³. Thus, best critical care can only be provided by on-site physicians, within a multidisciplinary critical care team¹⁴. The best ICU model is the “closed unit”!

A consensus report from two task forces of the Society of Critical Care Medicine (SCCM) attempted to define a best practice model for the ICU¹⁵. Their conclusion was (amongst others):

- Timely and personal intervention reduces mortality and LOS, and decreases cost of care.
- When an intensivist occupies an administrative role in the ICU providing benchmarking, clinical research, and standardization of care, this may further reduce LOS, cost of care and treatment complications.

Their recommendations are:

- An ICU with a dedicated team (ICU nurses, intensivist, respiratory care practitioner, pharmacologist^{10,16}), led by a full-time critical care-trained physician.
- The intensivist physician leading the ICU service should have no competing clinical responsibilities.
- ICUs with an exclusive critical care service and operating in the closed format may have improved outcomes.

There are good arguments for full-time, on-site specialists in the ICU¹⁷:

- Expert team on-site may be more effective in reducing mortality, length of stay, complications, and even costs (or more effective with higher expenses).

of the closed vs. open unit concept that may enhance an ICU’s ability to provide optimal patient care.

A number of studies and reviews demonstrate positive effects on ICU length of stay, mortality rate and overall complication rates^{2,3,4}. The reasons appear to be as follows:

1. Better understanding and management of ICU pathology
2. Better use of evidence-based medicine
3. Increased usage of protocols
4. Better ventilation management.

The assumption is that a closed unit model provides a setting where the intensivist can freely provide appropriate patient care without the interference of those who do not have state of the art knowledge of how to manage a critically ill patient. Primary physicians do not necessarily practice evidence-based critical care medicine nor do they plan to learn the most recent concepts of critical care management. A well structured semi-closed unit creates a situation where intensivists, who understand ICU pathology and practice evidence-based medicine, steer patient management. It also creates a flexible situation where care can be delivered in a collaborative manner with a strong multidisciplinary team – a team that may also include the primary physician(s). Indeed, patients enjoy continued involvement of their primary physicians who are more likely to continue their interaction if they are at least partially involved in the care of the patient.

Protocol-driven care has been shown to be very effective in improving various aspects of patient care in the ICU setting. Robust, well written protocols created by a team led by an intensivist can provide effective patient care without the immediate presence of a physician. In fact, Brook et al demonstrated that nursing-implemented sedation protocols not only deliver optimal sedation, but can also decrease a patient’s duration on mechanical ventilation⁵. Other patient care issues that can be positively influenced by the use of protocols implemented by non-physician healthcare providers include those associated with anemia⁶, mechanical ventilation^{7,8}, and management of ARDS/ALI⁹. Thus, it is obvious that well-written protocols can have very positive impact in semi-closed units.

Certain members of the team can improve outcome without the use of protocols. For example, Leape et al showed that ICUs can reduce the rate of preventable adverse drug events by 66% with the presence of a clinical pharmacist¹⁰. The knowledge of the clinical pharmacist improves outcome without the use of protocols or the immediate presence of an intensivist. This effect can be seen in both closed and semi-closed units as long as the culture of the ICU creates an environment where input by a qualified pharmacist is readily accepted.

Having twenty four hour-a-day coverage by an intensivist is a feat that is unrealistic for most hospitals due to perceived costs and the scarcity of intensivists. Additionally, an aging population will exacerbate the undersupply of intensivists that already exists¹. Burnout amongst the specialty is already a problem¹¹ and would only get worse if intensivists were asked to carry a heavier load than they already do. Including the primary physician in the ICU patient’s care not only makes the patient and primary physician happier, but also reduces the hospital cost of employing more intensivists, and eases the burden of the intensivist overseeing patient care.

Studies have not compared the semi-closed ICU model which has robust protocol-driven care and strong multidisciplinary teams against the closed ICU management model. With the continued rising costs of healthcare and the persistent undersupply of physicians board-certified in critical care, the semi-closed ICU model may make more sense to hospitals since the primary physician, under the guidance of the intensivist, can also help manage the patient when the intensivist is not immediately available. The stewardship and knowledge base of the intensivist and multidisciplinary team along with protocol-driven care and the presence of the primary physician can lead to patient care comparable to that seen in the closed unit model. It is now time for us to look at the semi-closed unit more seriously.

References for Pro & Con articles are available online at www.scahq.org



Literature Reviews

Cognitive Outcomes in Elderly High-Risk Patients After Off-Pump Versus Conventional Coronary Artery Bypass Grafting: A Randomized Trial.

Jensen BO, Hughes P, Rasmussen LS, Pedersen PU, Steinbruchel DA. *Circulation*.113:2790-2795, 2006

Reviewer: Mohammed Minhaj, MD
University of Chicago

Abstract Excerpt:

The proponents of off-pump coronary artery bypass graft (OPCAB) surgery suggest that there may be a decreased incidence of cognitive dysfunction postoperatively compared to conventional coronary artery bypass graft surgery (CCAB) with cardiopulmonary bypass (CPB). This study attempted to compare OPCAB with CCAB treatment in elderly patients (mean age of 76 years). Subjects underwent a battery of preoperative psychometric testing, were randomized to either receive OPCAB or CCAB and then were retested 3 months postoperatively. Cognitive dysfunction was defined as the occurrence of at least 2 out of 7 possible deficits (as defined by the testing). In the OPCAB group, 4/54 patients, and 5/51 in the CCAB group had cognitive dysfunction by these definitions. There was no significant difference between the two groups at three months.

Reviewer's Comments:

Coronary artery bypass graft surgery (CABG) continues to be one of the most commonly performed surgical procedures. Despite improvements, it still is associated with the potential for significant morbidity of several organ systems. Cognitive dysfunction has been well described postoperatively in patients undergoing CABG, but because of different patients populations studied, different methods of detection, and different definitions applied, a true incidence of cognitive dysfunction is difficult to ascertain.

Historically, it was felt that the use of CPB with the manipulation of a presumably calcified aorta led to embolic events that triggered cognitive decline. With the rise in interest in performing OPCAB and avoiding CPB it was felt that there was potential for decreasing the risk of cognitive dysfunction postoperatively.

However, several trials and meta-analyses have failed to establish any advantage for OPCAB with respect to this outcome.

This study as a subset of a larger study was a randomized trial that focused on the elderly-a patient population that has been identified as having a higher risk for postoperative cognitive dysfunction. The two groups were similar with respect to age, duration of surgery and comorbidities. All surgeries were performed by the same group of surgeons. Intraoperative mean pressures were kept between 50-60 mmHg per the authors, but the data were not presented. There was no significant difference in the two groups at 3 months with respect to cognitive function.

While well designed with respect to being a randomized trial and also considering the testing involved, there were some limitations to the study. First while the two groups were described as being equal, no p-values were presented to guarantee there was no significant difference statistically between the two groups. This was important given the seemingly large difference in education levels between the two groups. The OPCAB group had 9 patients with a university education, versus 1 in the CCAB group and 30 of the CCAB group had no education versus 17 in the OPCAB. While it is debatable how much difference this might have in cognitive dysfunction (especially when it is tested pre and postoperatively), further statistical analysis of incidence by education level might have been interesting. Additionally, the mean pressures were alluded to by the authors as being kept between 50-60 mmHg throughout the case, however no data was presented. This is important because the etiology of postoperative cognitive dysfunction has also been linked to hypotension during the procedure. Finally, the authors chose a 3 month follow-up period, perhaps a longer interval prior to postoperative testing might be beneficial in providing clues to long-term outcomes.

Overall, the role of OPCAB is still being defined. Benefits of avoiding CPB may be mitigated by concerns inherent with the nature of OPCAB. The potential for labile pressure changes, and prolonged hypotension (especially when the heart is suspended for exposure to distal anastomoses) might trigger cognitive decline as well as the aortic manipulation seen with traditional CABG and CPB. While it may be beneficial in certain patient populations, the current literature still has not borne out significant advantages in all patients. This study provides additional evidence that OPCAB may not be the panacea for avoidance of complications seen with CABG surgery.

Pro, from page 6

- Special expert consultation (e.g. clinical pharmacologist or bacteriologist) is more effective when cooperating with a team.
- Standardized, optimized procedures and protocols can better be fulfilled by a closed team.
- Hygienic measures and other strategies of quality improvement can be better controlled in a closed team.
- A closed team can achieve uniform admission and discharge policies for the ICU.

The multidisciplinary approach

The closed unit concept is a multidisciplinary approach with specialized physicians (intensivists), specialised nurses, respiratory therapists, and other experts working together in a team under the supervision of full-time directors¹⁷. This multidisciplinary approach is characterized by:

- Medical and nursing directors with authority and co-responsibility for ICU management
- Medical, respiratory therapy and nursing collaboration in a team approach
- Use of standards protocols and guidelines to assure consistent approach to medical, nursing, and technical issues

- Dedication to coordination and communication for all aspects of ICU management
- Emphasis on practitioner certification, research, education, ethical issues, and patient advocacy.

The team dynamics in a multidisciplinary team is an essential precondition to ascertain the high quality of care, with the necessary reliability, promptness, and adaptation to the various demands. Creating a good team spirit depends very much on the social competence of the directors.

Multidisciplinary cooperation

But the concept of team care not only relies on the expertise of the ICU team. It is also necessary to include the admitting or primarily responsible physicians as well as the special expertise of other disciplines. So, the ICU team has the obligation to cooperate closely with the other physicians involved in the individual patient's care. This cooperation must be based on a well established mutual trust. Every care provider bears his/her own responsibility, but the providers must also learn from each other. Only then, the critical care service can be optimized providing better outcome at acceptable resource consumption, reduction of potential complications, and a shorter length of stay.



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