

Society for Pediatric Anesthesia



education • research • patient care

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Editor's Note



Jayant K. Deshpande, MD

The success of the Annual Meeting in Las Vegas reflects the growth of the specialty and the Society. This growth also has brought many new and talented members to the field. I am pleased that one such member, Dr. Rita Agarwal from Children's Hospital of Denver, has agreed to act as Associate Editor of the Newsletter. She has been an active contributor to the literature reviews and now will take on the task of summarizing the events at the annual combined meeting of the Society and the AAP.

Dr. Thomas Mancuso, from Children's Hospital, Boston, also has been a regular contributor to the review section. In this issue, he debuts as the editor for the Point/Counterpoint section. The debate on the appropriateness of caudal epidural blocks for unilateral inguinal herniorrhaphy (and perhaps other "superficial" surgery) is sure to evoke (perhaps heated) discussion. We look forward to other controversies being debated in the future in this section.

Dr. Quentin Fisher, with John Hopkins, Baltimore, has agreed to coordinate the information about efforts of members in the developing world. We hope his article in this edition is the first of a series highlighting this important area.

Finally, the Society and the AAP Section on Anesthesiology will be working to develop educational material for parents and pediatricians on pediatric anesthesia issues. Dr. Myron Yaster has volunteered to coordinate this effort for the Committee. As one can see, there are many opportunities for members to participate in the SPA Publication Committee's efforts. I encourage you to send your ideas to me by phone, e-mail or snail mail.

Jayant K. Deshpande, M.D., Editor

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President's Message

Steven C. Hall, M.D.
SPA President
Children's Memorial Hospital
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It was Will Rogers who said "We can't all be heroes because someone has to sit on the curb and clap as they go by". I recently had the opportunity to do exactly that, to sit on the side and watch marvelous contributions by a large number of our members at our recent Joint AAP Anesthesia Section/SPA Winter Meeting in Las Vegas. The hard work and planning of Lyn Means, Frank McGowan and the Education Committee were rewarded with more depth and breadth than we had ever had at this meeting.

One of the most interesting aspects of the meeting, for me, came at the opening session. The audience was asked two questions. "Where do you primarily practice?" "How many previous SPA meetings have you attended?" The answers surprised me. First, according to our audience response system graciously supplied by Abbott Labs, the audience was pretty evenly divided between pediatric hospitals, university hospitals and medium to large community hospitals. Very few listed surgicenters or offices as their primary site of practice. What is the significance of this? We do have a diversified membership, clearly. Also, the membership tends to track the ASA membership in that the majority of cases are done in mid- and large-sized institutions. This especially makes sense for pediatric practice, since the overwhelming majority of pediatric patients are cared for by non-specialized anesthesiologists in non-pediatric specialty hospitals.

The other interesting answer came from the query about how many attendees had been to a previous SPA Winter

Meeting. Forty-nine percent said that this was their first meeting. Why did they decide to come this year to this meeting? Was it to get away from cold weather and come to sunny Nevada? Was the entertainment reputation of Las Vegas the major draw? In talking to people at the meeting who were new to me, two themes were consistently echoed. The meeting offered a wide range of interesting talks that spoke to them as practitioners. The offerings of lectures, panel, refresher courses, and workshops were enticing in terms of timeliness and variety. The second overwhelming issue was that of a desire to learn more about pediatric anesthesia. A large number of the attendees at this meeting were not full time pediatric anesthesiologists, but anesthesiologists who care for patients of all ages. As they look to ensure that their skills and knowledge are up-to-date, they are very interested in finding a reliable source of information and a forum for discussion of issues of interest. This meeting met their needs and expectations. Since SPA was formed with a large emphasis on its educational mission, it is heartening to see that we are accomplishing our goal.

This all having been said, my most vivid memories of the meeting came from three talks. These three talks represent to me the challenges of our future. First, Dr. Pettinati talked about stress reduction. As a surgeon forced by medical reasons to stop active practice, she faced a change in lifestyle that was dramatic. Her comments and approach provoked thoughtful discussion about the stresses of our career choice and modern life. Our

future as stable adults is in our own hands. Second, Attorney Steven Kern talked about the role of pediatric anesthesiologists in contracting and marketing. He pointed out that we do not usually do a good job of letting others know who we are and why what we do is important. He also pointed out that if we don't push ourselves, no one else will. Our future as economic beings is in our own hands. Lastly, Dr. Quentin Fisher talked about providing education and clinical care in third world settings. He talked about the opportunities to improve the care of children in places that do not have the same resources as we enjoy. As Chair of the SPA's Special Interest Group in Anesthesia for Underdeveloped Countries, he has started a program of cataloging organizations that help provide direct medical care, education or materials to under served populations. The Society is committed to identifying for its membership a wide variety of opportunities for contributing time, talents, and resources with those who do not have the same advantages as we do. Although the contributions of each of us as individuals can be small compared to the scope of under served children, the contribution that each of us makes ensures that the world is a better place. The future of these children can be in our hands. Three fascinating issues about personal and professional growth. Who we are and who we can be. It was a pleasure for me to sit on the curb and watch three days of talented people help us make ourselves better for the future.

1999 Pediatric Anesthesiology Review

Las Vegas, Nevada • February 18-21

Rita Agarwal, MD
Children's Hospital, Denver
Associate Editor

The 5th Annual Pediatric Anesthesiology Meeting was held this year on February 18-21 at the Desert Inn in Las Vegas. This meeting had the most number of registrants to date (most of whom were actually to be found at the meeting and NOT in the casinos). There were 362 attendees. Dr. Lynda Means (Riley Children's Hospital, Indianapolis) and her Educational/Program/Planning committee did an excellent job of providing an interesting, educational and fun meeting. The meeting opened with a Welcome Reception on Thursday night which allowed colleagues and friends from all over an opportunity to get together.

The morning session started with a welcome and introductory remarks by Dr. Steven Hall (Children's Memorial Hospital, Chicago), the SPA President and moved rapidly into the session titled **Scary Anesthetics**. Dr. Ira Landsman from the Children's Hospital of Pittsburgh, who discussed **The Worst Ventilation Dilemmas** by presenting three cases: The Good, the Bad and the Ugly, and reviewed their anesthetic management. The Good was a 2 year old girl with a bronchogenic cyst that obstructed her right main stem bronchus after induction of anesthesia. She required having an endotracheal tube placed preferentially down the left mainstem bronchus and her right bronchus occluded with a Fogarty catheter. The Bad was a newborn with micrognathia and respiratory distress. In this situation an LMA was successful in achieving an airway and allowing fiberoptic intubation via its lumen. The Ugly was a 5 year old male with Down's Syndrome who sustained airway burns despite the presence of a metal tracheostomy tube. Each case presentation was followed with a discussion on appropriate preparation and management.

Dr. Robert Holzman, (Children's Hospital, Boston) presented **The Worst Environment**, which was a discussion of

medical management during wartime or hostile conditions. Adding poignancy to the discussion were the grim statistics that approximately 2 million children have been killed and 4 million disabled in the past decade in such conditions. Children have also suffered the as a result of malnutrition, loss of infrastructure, and uprooting and separation of their families. Ninety four percent of children from the Sarajevo region met the Diagnostic and Statistical Manual of Mental Disorders criteria for posttraumatic stress disorder. Chemical weapons, blast injuries, and missile wounds were the most common causes of trauma in wartime situations, their mechanism of injury and specific consideration for management were presented.

Moving from the wartime environment to another sometimes hostile environment, Dr. David Steward, Children's Hospital of Los Angeles, discussed **The Worst Neonate**. Dr. Steward reviewed some of the problems that lead to apprehension and discomfort (providing anesthesia in an unfamiliar location- Neonatal Intensive Care Unit, difficulty in achieving Intravenous access, etc) before diving into the "worst" neonate—the premature baby with necrotizing enterocolitis. These are usually very small, very small infants with multiple organ dysfunction. The etiology

of NEC is unknown, but Dr. Steward discussed the risk factors that have been identified, the signs and symptoms of the disease and finally the anesthetic management.

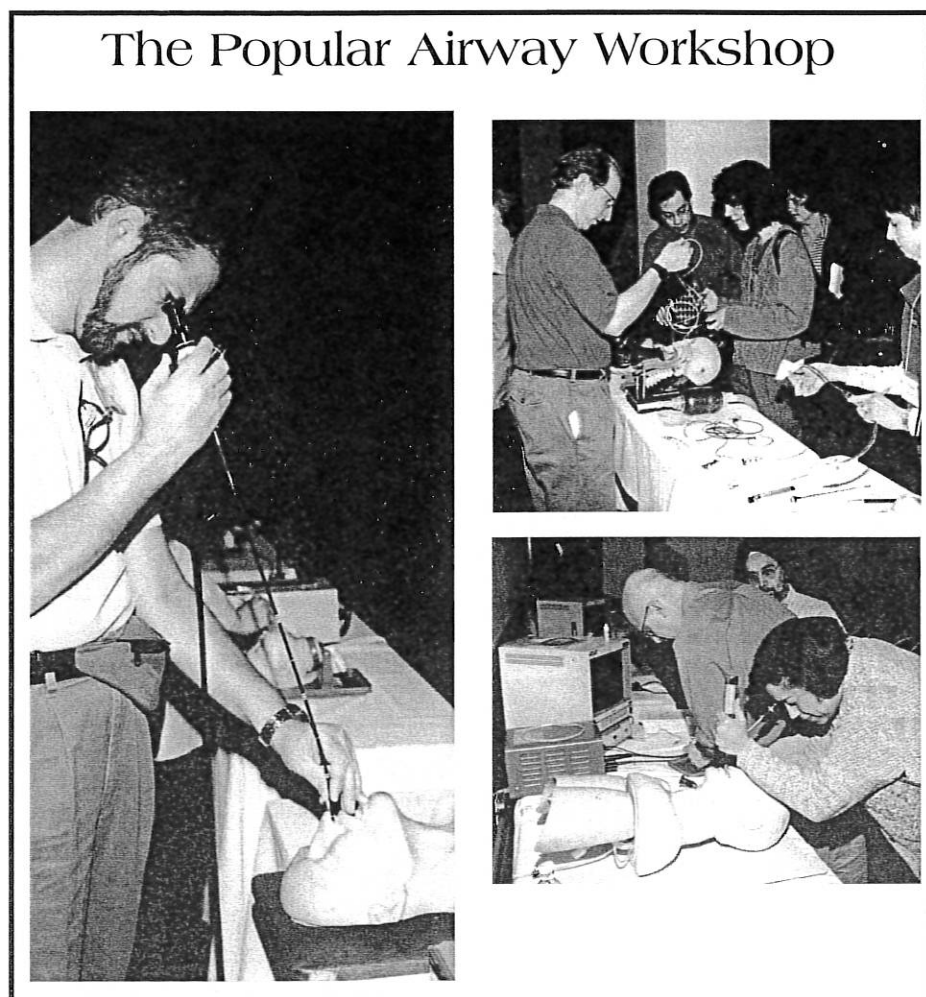
Poster Discussions



Dr. Quentin Fischer, (Johns Hopkins University) was the final speaker of the morning, and he presented his experiences with **Third World Anesthesia**. He gave a fascinating lecture on the unique problems faced by the medical team and the anesthetist when providing care in austere circumstances. To better illustrate the difficulty faced by the medical teams he presented some typical cases of patients that and situations that might arise. Many of the patients are malnourished, undersized and anemic, the equipment and techniques are antiquated. Mechanical ventilators are generally unavailable, inhalational induction and maintenance with halothane is the mainstay of care. Advance planning and a team approach are critical.

After a break and the opportunity to informally view the posters, there was an **Oral Abstract Presentation**, moderated by Drs. Anne Lynn (Children's Hospital and Medical Center, Seattle), James Viney (Primary Children's Medical Center, Salt Lake City) and Joseph Tobin (Wake Forest University School of Medicine). A wide variety of topics were discussed including the negative inotropic effect of propofol, pre-operative serum troponin I levels in neonates with hypoplastic left heart syndrome, synthesis of (3H) Azidodantrolene, the effect of sevoflurane and desflurane on hypoxia-ischemia induced neuronal apoptosis, parental presence and sedatives during induction, use of the COPA and a comparison of various sedative techniques for heart catheterization. Lunch with the exhibitors followed.

The afternoon session commenced with a general session that focused on **Anesthesia Outcomes: Quality of Care and Anesthesia Providers** by Dr. Jeffery Silber, (Children's Hospital of Philadelphia) and **Negotiations and Contracts** by Steven Kern, Esq. (Kern, Augustine, Conroy & Schoppman, Bridgewater, CT). Dr. Silber discussed the difficulty in determining quality of care because of a host of confounding factors. Failure-to-rescue rate measures the ability of a provider to resuscitate a patient who has already developed a complications. It better measures the ability of a hospital and provider to deal



with complicated patients and therefore may have an advantage over measuring death and complications rates. He concluded by summarizing the results of several studies that suggest that higher rates of board certification in anesthesia are associated with lower failure to rescue rates, and therefore better outcomes.

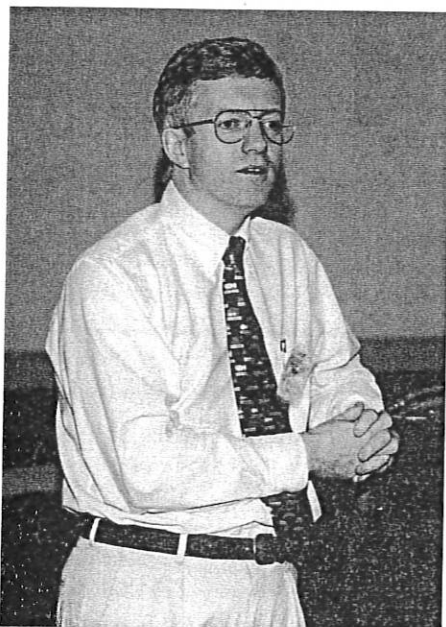
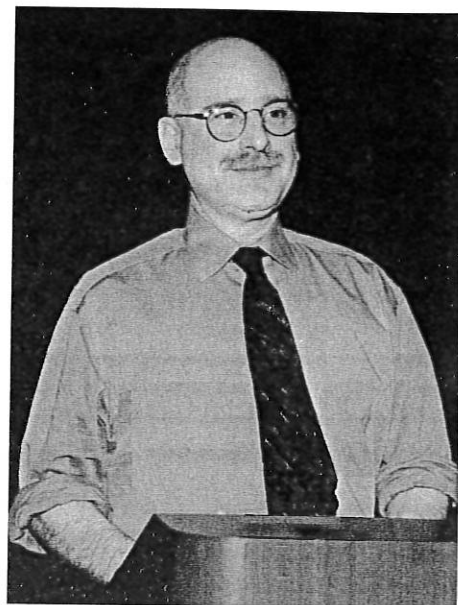
In the afternoon sessions, participants were offered a choice of attending **Refresher Courses or Workshops**. There were three refresher courses: **Non-cardiac Anesthesia in the Patient with Cardiac Disease** by Dr. Susan Nicolson (Children's Hospital of Philadelphia), **The Ex-Premie** by Dr. Charles Dean Kurth (Children's Hospital of Philadelphia), and **NPO and Perioperative Fluid Management** by Dr. Frederic Berry (UVA Health Science Center).

The Workshops continue to be a popular and well attended part of the meeting, with many participants staying late. There were 12 workshops on a potpourri of topics on the first and second days of the meeting: LMA, Lightwands, Fiberoptic Technique, Invigorating my Career, Anesthesia Department Management, Pediatric CPR and Intraosseous Infusions, Common Blocks, Upper Extremity Blocks, Managing the Epidural Space, Lower Extremity Blocks, Neonatal Pain Management, Computer & Info Access, Pain Service-Academic/Private Practice, Leadership Skills for a Changing World, Do you Really Need to Change Jobs?, Spinal Anesthesia, Options for Physician Renewal and Acupuncture.

The evening finished with a Wine and Cheese Reception with the Exhibitors.

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The second day of the conference, a crisp, blustery Saturday morning began with **Walk Around Poster Discussions** moderated by Rita Agarwal (Children's Hospital, Denver), Frederic Berry (UVA Health Science Center), C. Dean Kurth (Children's Hospital, Philadelphia), Susan Nicolson (Children's Hospital Philadelphia), James Steven (Children's Hospital, Philadelphia), and James Viney (Primary Children's Medical Center, Salt Lake City). There were over 60 excellent posters on a wide variety of topics

covering basic science and clinical practice. I encourage all SPA members and other interested parties to review the course syllabus.

The poster sessions were followed by the Awards Presentation, moderated by Dr. Patricia Davidson* (see highlights).

This was followed by a presentation on **Stress Management** by Dr. Pamela Pettinati, from St Elizabeth's Medical Center, Brighton, MA. This was a fascinating talk on the mind-body connection and the relaxation response.

The Relaxation Response refers to the ability of patients to decrease heart rate and blood pressure through a program of classroom input, instruction, cognitive restructuring, yoga and exercise. She also discussed Mindfulness Meditation, which teaches individuals to decrease sympathetic hyper arousal. These techniques may also enhance immune function.

The afternoon sessions were once again divided into a choice of attending Refresher Courses or Workshops. The

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Refresher courses were on: **Preoperative Evaluation and Preparation on the Pediatric Patient for Anesthesia** by Dr. Ann Bailey (University of North Carolina), **The Difficult Pediatric Airway** by Dr. Ruth Bennie (Riley Children's Hospital, Indianapolis) and **Anesthesia Outside the OR** by Dr. Steven Hall (Children's Memorial Hospital, Chicago). The Workshops were similar to the workshops on Friday.

Sunday morning, the third day of the conference started with a breakfast sponsored by Baxter. The first session was on **Pain Management and Alternative Medicine**, and was moderated by Frank McGowan. Dr. Yuan-Chi Lin (Stanford University) gave an exciting lecture entitled **Holistic Remedies for**

Pediatric Pain- Are You Doing Them Already? He started with a review of the complementary alternative treatment (CAM) modalities available and practiced in the United States and the world. In 1997, an estimated 4/10 Americans used at least one alternative therapy. In pediatric pain centers in the United States, 70% provide various alternative therapies for their patients, including biofeedback, imagery and relaxation, massage, meditation acupuncture, art therapy, hypnosis, music therapy etc. There is very little research documenting the efficacy of these programs, however there are currently trials underway to do so.

The next portion of the morning session was entitled **Co-Existing Diseases** and was moderated by Dr. Anne M. Lynn (Children's Hospital of Seattle). Dr. Frank McGowan (Children's Hospital, Boston) started off with **New Insights into the Mechanisms of Neonatal Brain Injury**. He summarized the latest research on programmed cell death (apoptosis) and the possible effects of drug and other stressors on it.

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Dr. Dorothy Becker from the University of Pittsburgh presented the latest theories and approaches to managing the pediatric diabetic patient in a lecture entitled **What's New in Diabetes Management**. Much stricter glycemic control has now been shown to significantly decrease the incidence of diabetic complications, but may contribute to an increase prevalence of hypoglycemia. Adequate glucose delivery and monitoring becomes essential during anesthesia and surgery. The use of insulin infusion pumps may also lead to an increase incidence of ketosis than in the past.

The morning finished with two entertaining and informative sessions. The first moderated by Dr. James Viney was a debate on the need for halothane (**PRO / CON: Do We Need Halothane?**) Pro: Dr. Charles Cote (Children's Memorial Hospital, Chicago) argued that halothane was a little slower for induction, certainly caused more hemodynamic problems, BUT allowed for longer exam times during bronchoscopy and laryngoscopy, cheaper and had less emergence delirium associated with it. Con: Dr. Peter Davis (Children's Hospital, Pittsburgh) argued that halothane was outdated, slow, unnecessary and that the emergence delirium was associated more with pain than the volatile agent. This led to a lively discussion from the audience as to the relative faults and merits of each agent. The debate was called a tie at the end of the session.

The second and concluding session of the meeting was **Pediatric Anesthesia Jeopardy**, moderated by Drs. Frank McGowan (Children's Hospital, Boston), Patty Davidson (Children's Hospital Columbus), Lynne Ferrari (Children's Hospital, Boston) James Steven (Children's Hospital Philadelphia) and Myron Yaster (Johns Hopkins Hospital). A wide variety of questions and answers were discussed, including NPO times (the new ASA guidelines were presented), how to handle the Jehovah's Witness patients, and mandatory pregnancy testing in teenage girls.

1999 Corporate Meeting Sponsors

The Society for Pediatric Anesthesia acknowledges with deep appreciation the following organizations that have provided educational grants.

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Awards



George A. Gregory, M.D.

The SPA/AAP Awards Presentation was moderated by Patricia Davidson, M.D., Columbus Children's Hospital.

The Robert M. Smith Award of the AAP section of Anesthesiology, for lifelong contribution and meritorious service to pediatric anesthesiology was presented by J. Michael Badgewell, M.D.

George A. Gregory, M.D.

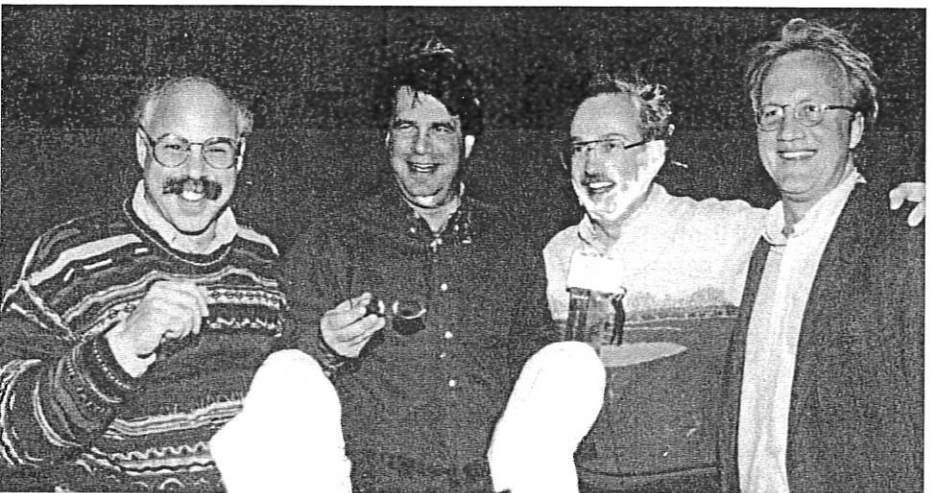
AAP Resident Research Award (The John B. Downes Award) was given to the top three resident presentations at the meeting:

First Place: Mike Neville, M.D. of Wake Forest University School of Medicine, Winston-Salem, NC for the presentation entitled *Impact of Intraoperative Transesophageal Echocardiography on Anesthetic and Surgical Management of Pediatric Patients with Congenital and Acquired Heart Disease.*

Second Place: Lisa W. Faberowski, M.D. of University of Florida, Gainesville, FL. *The Effect of Sevoflurane and Desflurane on Hypoxia-ischemia Induced Neuronal Apoptosis.*

Third Place: Senthilkumar Sadhasivam, M.D. of All India Institute of Medical Services, New Delhi, India. *Optimal Dose of Prophylactic Ondansetron and Justification of its Use in Prevention of Postoperative Nausea and Vomiting Following Strabismus Repair in Children: A Dose-Response Study.*

Unusual Antics or Basic Ballroom Behavior?



\$500,000 IARS Frontiers in Anesthesia Research Award - Third Recipient

The Board of Trustees of the International Anesthesia Research Society (IARS) announced at the 73rd Clinical and Scientific Congress the third recipient of the \$500,000 IARS Frontiers in Anesthesia Research Award. The Award was established by the IARS in 1994 "to foster innovation and creativity by an individual scientist in the field of Anesthesiology." The third recipient is:

Michael Schäfer, MD
Freie Universität Berlin
University Hospital Benjamin Franklin
Berlin, Germany

Dr. Schäfer's research project is titled, "**Regulatory Mechanisms of Peripheral Opioid Analgesia.**" Dr. Schäfer is an Assistant Professor in the Department of Anesthesiology and Critical Care Medicine at Freie Universität Berlin, University Hospital Benjamin Franklin, Berlin, Germany.

The IARS is a non-profit medical society founded in 1922 with a mandate "to foster progress and research in all phases of anesthesia." To that end, the Society established the first journal in the specialty, *Anesthesi & Analgesia* which is in its 77th year of publication. The journal is published monthly and includes peer-reviewed, original clinical and research articles. The IARS sponsors an annual Clinical and Scientific Congress which assembles anesthesiologists, pharmacologists, research scientists and other allied health-care professionals from the international anesthesia community to review new techniques and developments in the field of anesthesiology. In addition, the Society co-sponsors the biennial America-Japan Anesthesia Congress with the Japan Society for Clinical Anesthesia. In addition to the Frontiers in Anesthesia Research Award, the IARS also funds the IARS Clinical Scholar Research Awards which are 2-year awards valued at \$75,000.

For additional information contact:

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SPA / FAER Update RESEARCH DEADLINES

Clinical and Basic Science — Research Starter Grant
Application deadlines are February 15 and August 15
Awards are intended for anesthesiologists holding a faculty appointment, who are not yet ready to conduct independent research. Starter grants provide seed money to initiate a project that will advance the applicant's training and will allow the applicant to seek future additional support. No significant extramural support should be available, either directly or indirectly, and applicants should not have received previous peer-reviewed funding from any other source.

Clinical and Basic Science — New Investigator Award
Application deadlines are February 15 and August 15
Awards are intended for anesthesiologists on the verge of becoming independent investigators. Although applicants must have an experienced investigator as an adviser, the project should be planned and conducted primarily by the applicant.

Educational Research Grants

Application deadlines are February 15 and August 15
Grants are intended to support research in anesthesia education, and proposals may include the design and evaluation of specific educational techniques and curricula, development of instruments for the prediction and evaluation of outcomes, or other original and creative investigations which have an impact on the quality of anesthesia education and care.

Anesthesiology Research Fellowships

Application deadlines are February 15 and August 15
Intended for residents who will spend 1 to 2 years engaged in full-time (>75%) anesthesia research. Research plan should provide significant training in research techniques and scientific methods.

Requests for applications can be e-mailed to Kerry Todd, Assistant Director (todd.kerry@mayo.edu) or downloaded from the internet (<http://www.FAER.org>). You may also contact Alan Sessler, M.D., Executive Director, FAER, Charlton 1-128, Mayo Clinic, 200 First Street SW, Rochester, MN 55905
Email: ssessler.alan@mayo.edu, Phone (507) 266 6866.

Point / Counterpoint

Caudal Anesthesia for Unilateral Inguinal Hernia Repair in Healthy ASA I Pediatric Outpatients.

PRO



Carolyn F. Banister, M.D., FAAP
Chief of Anesthesia
Egleston Children's Hospital
Emory University School of Medicine
Atlanta, GA

Caudal Blocks may be the most common regional anesthetic technique performed in pediatric patients today. The decision to use a caudal block over other techniques such as local anesthetic wound infiltration, ilioinguinal block, or nerve block performed by the surgeon under direct vision is frequently one of personal preference especially when efficacy, safety and cost are equivalent. I prefer caudal blocks for lower abdominal and lower extremity procedures in healthy children for several reasons. The anatomical landmarks are easily identified and the block is simple to perform with reliable analgesia to the umbilicus (some advocates use of this block for analgesia to the diaphragm.) Its safety has been demonstrated in large clinical series. (1,2,3) The currently reported failure rate is less than four percent. Placing the caudal block after induction, but before skin incision, allows for pre-emptive analgesia which is not afforded by techniques in which the surgeon administers local anesthetic during or at the end of the surgical procedure. Timing the administration of the block after induction when the surgeon is scrubbing for the procedure does not delay incision and, in experienced hands, the time required to perform the block is

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CON



Kar-Mei Chan, MD



Zeev N. Kain, MD

Section of Pediatric Anesthesia
Yale University School of Medicine
New Haven, CT

With the recent explosion of health care costs, major changes in medical technology assessment have occurred. In the past, safety formed the primary requirement; today however, feasibility, effectiveness, indications for use, and improved outcome with decreased cost have become the focus (1). In turn, physicians are being asked to adjust their practice from that based on beliefs and anecdotal experiences to that based on evidence (i.e. evidence-based medicine). While the use of caudal anesthesia for unilateral inguinal hernia repair in healthy ASA I pediatric outpatients has received widespread recognition, its acceptance is not evidence-based and excludes evaluation of significantly increased operational hospital costs and patient outcomes that are not improved. It is important to emphasize, however, that the following discussion is limited to the above patient population and does not extend to children who are premature, ASA II-IV or children who undergo more extensive surgical procedures. Advantages of caudal anesthesia in children include: simplicity, reliability, and safety. The sacral hiatus is easily palpable in children and the fusion of sacral segments remain incomplete until twenty-five years of age (2, 3). In addition, the success rate of this technique increases with experience. Other advantages include reduced intravenous narcotic use, respiratory safety (especially if only lumbar sacral

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Counterpoint - PRO

(continued from page 11)

less than 60 seconds. The presence of the caudal block intraoperatively decreases general anesthetic requirements allowing for faster emergence in a pain-free patient. The block provides immediate analgesia upon emergence as well as postoperative analgesia that is maintained for several hours. The reduced utilization of expensive volatile general anesthetics intraoperatively and of parental analgesia lead to cost savings for this technique. Recent studies designed to evaluate the analgesic efficacy and safety of caudal clonidine support the use of combined bupivacaine/clonidine caudals. In pediatric hernia repairs, this combination provides the added benefit of prolonging the duration of the caudal by 60 minutes over that with bupivacaine alone or bupivacaine/epinephrine combinations. The results demonstrate safe use of 1-2 mcg/kg clonidine to prolong the duration of the caudal and reduce the need for additional analgesics during the first 24 hours postoperatively. (4) Analgesia may be supplemented/prolonged after the caudal dissipates with the use of IV or oral nonsteroidal analgesics in the post-operative period. Minimizing opioid administration intraoperatively and postoperatively reduces the incidence of side effects such as nausea, vomiting, ileus, sedation, and potential prolongation of hospitalization. The occurrence of these and other side effect with caudal analgesia is significantly lower than that associated with the use of parental morphine in comparable patients (5); the occurrence of any of these side effects leads to increased in-hospital costs due to delay of discharge. The greatest limitation for caudal block is the greatest recommended restriction to children younger than 7-8 years of age. Aberrant sacral anatomy in children older than this age leads to a 15% failure rate. Lower extremity weakness is a risk and an inconvenience which may be minimized by lowering the concentration of the local anesthetic or limiting the volume to 3/4 cc/kg.(6) The risks of dural puncture and intravascular injection may be decreased by careful aspiration and use of catheter techniques rather than needle techniques. There are few absolute contraindications to the block. Coagulopathy and infection at the site of needle insertion are contraindications to its use. Relative contraindications observed by some practitioners include patients with central or peripheral neurological diseases. In summary, the caudal block is a very useful technique in healthy children due to its simplicity, reliability, safety and potential for cost savings to the patient.

The Pediatric Anesthesiology 1999 Syllabus is available for purchase from Society Headquarters for \$25.00, plus shipping. Call, write or fax your request to:

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References

1. Broadman LM et al. Kiddie caudals: experience with 1154 consecutive cases without complications. *Anesth Analg* 66: S18, 1987.
2. Dalens B, Hansnouia A. Caudal anesthesia in pediatric surgery: Success rate and adverse effects in 750 consecutive patients. *Anesth Analg* 68:83, 1989.
3. Desparmet J et al. Evolution of regional anesthesia in a pediatric surgical practice. *Advances in Pain Research and Therapy*. Vol. 15, 1990.
4. Klimscha W. et al. The Efficacy and Safety of a Clonidine/ Bupivacaine Combination in Caudal Blockade for Pediatric Hernia Repair. *Anesth Analg* 86(1), 54, 1999.
5. Lunn JN. Postoperative analgesia after circumcision. *Anaesthesia* 34:552, 1979.
6. Wolf A et al. Bupivacaine caudal analgesia in infants and children: the optimal effective concentration. *Anes* 69:102, 1998.

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Counterpoint - CON

(continued from page 11)

nerves are blocked), and relief of pain in the early postoperative period (3). The disadvantages of caudal anesthesia, however, must also be considered in assessing its appropriateness for unilateral inguinal hernia repair. Complications associated specifically with this procedure, while rare, include venous air embolism, dural puncture, permanent neurological damage, intravascular injection of local anesthesia (with subsequent issues of toxicity), hypotension, arrhythmias, respiratory arrest, and cardiovascular collapse (4-8). Potential postoperative problems related to caudal anesthesia after inguinal hernia repair include residual motor blockade, lack of attenuation of nausea and vomiting, and apparent delay in micturition (9). The fact that operating room start times may be delayed and total surgical times extended by these procedures are also significant factors, especially considering that the literature has not proven superior effectiveness of caudal blockade for unilateral inguinal hernia repairs. Furthermore, with high operating room costs and the requirement for specific manpower to administer caudal anesthesia, cost only increases. The fact that a surgeon can administer local wound infiltration or ilioinguinal/iliohypogastric nerve blocks, providing analgesia as effective as a caudal blockade, further supports the lack of indication for these blocks for healthy pediatric outpatients undergoing minor procedures (9-17). Splinter et al. show that intravenous ketorolac combined with local wound infiltration gives superior postoperative analgesia as compared to caudal blockade combined with local wound infiltration (18). Moreover, injecting ketorolac is simpler, quicker, and more reliable than performing a caudal block. Bramwell et al. demonstrates that caudal anesthesia does not achieve better postoperative pain relief than intramuscular injections of codeine for inguinal herniotomies (19). Moores et al. found that caudal bupivacaine cannot provide superior analgesia when compared to rectal diclofenac (20). In addition, physicians who combined local anesthesia and opioids in caudal procedures risk delayed onset of respiratory depression especially after discharge to home (21, 22). In fact, epidural opioids have no place in ambulatory surgery because of this risk (23). In conclusion, the fact that caudal blockade is quick, easy to use, and simple does not justify its use. First, any anesthetic procedure no matter how simple can result in unexpected complications. Second, the more important question to ask is "does it improve outcome?" If it does not, issues of simplicity of technology and low cost of materials are irrelevant and should not be accepted as valid argument. In 1999, anesthesia techniques need to be based on evidence and scientific data and not on beliefs and anecdotal experiences. Clearly, there exists no evidence to show that caudal anesthesia in healthy outpatient children for unilateral; inguinal herniotomy has advantages over other commonly employed analgesic techniques. In contrast, caudal blockade may result in increased operating room times and increased risk to patients, without any substantial associated benefits.

References

1. Fleisher LA, Mantha S, Roizen M. Medical Technology Assessment: An Overview. *Anesth Analg* 1998;87:1271-82.
2. Dalens B, Hasnaoui A. Caudal Anesthesia in Pediatric Surgery: Success Rate and Adverse Effects in 750 Consecutive Patients. *Anesth Analg* 1989; 68:83-9. Gregory GA. Pediatric Anesthesia Third Edition. Sethna NF, Berde CB. *Pediatric Regional Anesthesia*. 1994; chapter 11:290-5
3. Cousins MJ. Neural Blockade in Clinical Anesthesia and Management of Pain. Willis RJ. *Caudal Epidural Blockade*. 1998; chapter 9:323-40.
4. Guinard JP, Borboen M. Probable Venous Air Embolism During Caudal Anesthesia in a Child. *Anesthes Analg* 1993;76:1134-5.
5. Lee E, Collins G. Respiratory Arrest After Caudal Bupivacaine [letter comment]. *Anaesthesia* 1989;44(4):324-5.
6. Fortuna A. Respiratory Arrest After a Caudal Injection of Bupivacaine [letter comment]. *Anaesthesia* 1989;44:1007.
7. Matsumiya N, Dohi S, Takahashi H et al. Cardiovascular Collapse in an infant After Caudal Anesthesia with a Lidocaine-Epinephrine Solution. *Anesth Analg* 1986;65:1074-6
8. Freid EB, Bailey AG, Valley RD. Electrocardiographic and Hemodynamic Changes Associated with Unintentional Intravascular Injection of Bupivacaine with Epinephrine in Infants. *Anesthesiology* 1993; 79:394-8.
9. Splinter WM, Bass J, Komocar L. Regional Anaesthesia for Hernia Repair in Children: Local vs. Caudal Anesthesia. *Can J m* 1995;42(3):197-200.
10. Schindler M, Swann M, Crawford M. A Comparison of Postoperative Analgesia Provided by Wound Infiltration or Caudal Anesthesia. *Anaesth Intens Care* 1991;19:46-9.
11. Fisher QA, McComiskey CM, Hill L et al. Postoperative Voiding Interval and Duration of Analgesia Following Peripheral or Caudal Nerve Blocks in Children. *Anesthes Analg* 1993;76:173-7.
12. Cross GD, Barrett RF. Comparison of Two Regional Techniques for Postoperative Analgesia in Children Following Herniotomy and Orchiopexy. *Anaesthesia* 1987;42:845-9.
13. Markham SJ, Tomlinson J, Hain WR. Ilioinguinal Nerve Block in Children: A Comparison with Caudal block for intra and postoperative analgesia. *Anaesthesia* 1986;41:1098-1103.

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Counterpoint - CON

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14. Conroy JM, Othersen HB, Dorman BH, et al. A Comparison of Wound Instillation and Caudal Block for Analgesia Following Pediatric Inguinal Herniorrhaphy. *J Ped Surg* 1993;28:565-7.
15. Fell D, Derrington MC, Taylor E, Wandless JG. Paediatric Postoperative Analgesia: A comparison between caudal Block and wound infiltration of local anesthetic. *Anaesthesia* 1988;43:107-10.
16. Langer JC, Shandling B, Rosenberg M. Intraoperative Bupivacaine During Outpatient Hernia repair in Children: A Randomized Double Blind Trial. *J Ped Surg* 1987;2:267-70
17. Reid MF, Harris R, Phillips PD, et al. Day-case Herniotomy in Children: A Comparison of ilio-inguinal nerve block and wound infiltration for postoperative analgesia. *Anaesthesia* 1987;42:658-61.
18. Splinter WM, Reid CW, Roberts DJ, Bass J. Reducing Pain After Inguinal Hernia Repair in Children: Caudal Anesthesia versus Ketorolac Tromethamine. *Anesthesiology* 1997;87:542-6.
19. Bramwell RGB, Bullen C, Radford P. Caudal Block for Postoperative analgesia in Children. *Anaesthesia* 1982;37:1024-28.
20. Moores MA, Wandless JG, Fell D. Paediatric Postoperative Analgesia: a comparison of rectal diclofenac with caudal bupivacaine after inguinal herniotomy. *Anaesthesia* 1990;45:156-8
21. Krane EJ. Delayed Respiratory Depression in a Child after Caudal Epidural Morphine. *Anesth Analg* 1988;67:79-82.
22. Tyler DC, Krane EJ. Epidural Opioids in Children. *J Ped Surg* 1989;24(5):469-73
23. Bosenberg AT. Caudal Epidural Morphine in Children-a need for caution: letter]. *South African Medical Journal* 1993;83:367.

Editor's Note: After careful review of both sides of the debate regarding the use of caudal analgesia following herniorrhaphy, I am firmly in favor of ...*BOTH* positions. The two authors discuss slightly different aspects of the question and the benefit is a more complete discussion of the topic. Dr. Bannister favors the use of caudals in children under the age of 7-8 years who are undergoing bilateral hernia repairs while Drs. Kain and Chan limit their remarks to unilateral herniorrhaphies.

For unilateral hernia repair, since the surgeon infiltrates only one side, the volume of local which may be safely used is so large that good analgesia is usually assured. It is unclear that local infiltration is clearly superior to caudal, but I do believe that for unilateral herniorrhaphy, it would be very difficult to show a difference in efficacy between the two techniques.

For bilateral herniorrhaphies, I feel that caudals offer a greater likelihood of complete analgesia than does wound infiltration, given the limits on the volume of local anesthetic which can be infiltrated into in each side.

Dr. Bannister's point regarding preemptive analgesia provided by caudal administration of bupivacaine is an interesting one. There is some indication that preemptive analgesia may provide benefits which are not matched by analgesia provided after the surgical stimulus.

I remain unconvinced that economic considerations make the use of caudal analgesia unattractive. In my practice, teaching residents and fellows, I find that there is adequate time during the time the surgeons scrub to perform caudals. Once we have completed the caudal, the child is repositioned and ready for prepping with no loss of OR time. As a matter of fact, since all the preparation for placement of a caudal is up to me, I make the argument that it may be quicker than a bilateral wound infiltration done by the surgeon. If teaching is involved, the surgeon takes extra time to demonstrate and watch the surgical trainee perform the local infiltration. And it seems that often the correct amount and concentration of bupivacaine and the proper syringe and needles are not immediately available and time is wasted while a search is undertaken to find them.

As I said earlier, I find wisdom in both the pro and con statements regarding the use of caudals for herniorrhaphies in children. Personally, I am more likely to use them for patients undergoing bilateral repairs or unilateral repairs and circumcisions. However, I must admit that when my then 3 year old



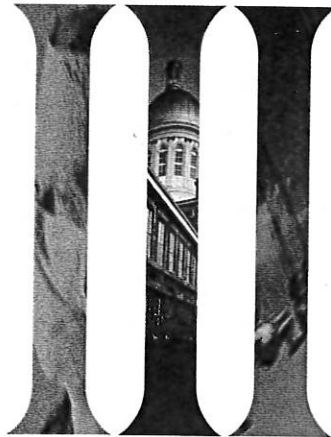
Dr. Mancuso with his son Paul

son Paul (the good-looking one in the photo) had his unilateral hernia repaired several years ago, a caudal was done at the discretion of his anesthesiologist and surgeon, I was the dad that day not the doctor, and I was quite pleased with the result.

Thomas J. Mancuso, M.D., FAAP
Section Editor
Children's Hospital Boston, MA



m i l l e n n i u m



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EIMP is a member of IAPCO and ICCA

rooms in the US. Finally, MSA teams are usually composed of practitioners who have not previously worked together, and bring diverse personalities, skills, and expectations of each others' roles.

Using as an example a project site of Operation Smile (a plastic surgical medical service organization), several key anesthetic challenges were discussed. Choosing anesthetists who are able to deal with improvisation, while avoiding the "cowboy" mentality of excessive risk-taking is a difficult issue for all volunteer programs. Patients frequently have had little medical evaluation, and may be malnourished, anemic, or harbor previously-undiagnosed congenital abnormalities. Equipment may consist of obsolete donations from other countries, or be of unfamiliar local manufacture. Given the lack of replacement parts, non-standard improvisations are common. Anesthetic Techniques may be limited, requiring the use of agents under suboptimal circumstances (such as halothane in a malnourished, dehydrated child). Surgical safety can be an issue when the itinerant surgeon attempts an extensive procedure with inadequate consideration for monitoring, bloodbanking, ICU availability, or post-operative analgesia in an unmonitored environment. Modifications of standard surgical plans are frequently necessary to assure acceptable, rather than optimal, results in austere settings. Assessment of outcomes (quality assurance) is not commonly applied to MSA anesthesia care, and the nature and

Developing World

rate of various complications is not well-known. there is a clear need to study this issue. Finally, since most MSA programs stress education of host-country anesthesia providers, it is important to recognize political issues that give rise to resentment and feelings of paternalism that might inhibit free exchange.

A meeting of The Committee for International Education and Service was attended by about 20 SPA members, who discussed several proposed projects regarding teaching and providing anesthesia care in underdeveloped countries. There was a general sentiment that the group's primary interest is to promote good anesthetic care for children in resource-deficient parts of the world, primarily through educational activities for providers. Additional interests include proactive roles with charitable organizations that send anesthesiologists abroad in helping them provide safe anesthesia for their pediatric patients, and support for US-based anesthesiologists who travel abroad to assist in training and service. Juan Gutierrez suggested the present name for the committee.

Charles Coté reported on the activities of the Pediatric Committee of the World Federation of Societies of Anesthesiologists. WFSA supports a Pediatric Anesthesia teaching center in Santiago, Chile which accepts a South American fellow for a one year program. Dr. Coté pointed out that this has many advantages over bringing a fellow to the US: the fellow works within his/her own cultural and linguistic region, in a program attuned to the conditions in the fellow's own country; fellows are well-motivated to return to their home hospital; and it is much less expensive than bringing fellows to the US or sending visiting professors abroad. The CIES voted to endorse a request for SPA to support the WFSA program.

Next, the group considered how SPA might assist in providing anesthesia books and journals for departments in underdeveloped regions. Computer-based materials (such as CD's and Internet access) are ideally suited to remote regions, but technology is not reliably available, and SPA has no present access to donated electronics or materials. Despite considerations of weight and shipping, however, many SPA members indicated they would be able to make their journals (many still unread!) available for donation. Additional problems discussed included matching donors (SPA members and/or publishers) with recipient departments, and maintaining ongoing supplies of updated materials. Paul Samuels, Joe Tobias, and Jerome Parness agreed to make further recommendations. SPA members interested in this topic should contact one of them.

The group also discussed development of curriculum materials (a slide bank, for example) for standard topics for use by itinerants to MSA sites abroad. Groups such as Interplast and Operation Smile provide a few lectures at their sites, while participants in programs like Health Volunteers Overseas utilize

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Anesthesia in the Developing World



Quentin Fisher, M.D.

Anesthesia in underdeveloped countries was a topic of consideration during the annual SPA meeting in February. In the Friday panel on "Scary Anesthetics", Quentin Fisher gave an overview of anesthesia for Medical Services Abroad (MSA), highlighting features unique to that practice. On Saturday, the Committee for International Education and Service met to discuss programs in which SPA could support quality anesthesia and teaching for pediatric patients in underdeveloped countries.

In the panel discussion, Dr. Fisher pointed out that medical services abroad demand a unique form of anesthesia practice, which neither replicates U.S. practices, nor those used on a daily basis in host countries. First, MSA surgical programs seek to treat many more patients than the local facility customarily accommodates, demanding rapid turnovers, brief stays in PACU's with staff not necessarily well-versed in airway management, and transfer to floors where minimal professional supervision is available. Secondly, despite the lack of current technologies, MSA anesthesiologists strive for the same standards of safety and surveillance they would observe in their well-equipped operating rooms in the US. Finally, MSA teams are usually composed of practitioners who have not previously worked together, and bring diverse personalities, skills, and expectations of each others' roles.

Using as an example a project site of Operation Smile (a plastic surgical medical service organization), several key anesthetic challenges were discussed. Choosing anesthesiologists who are able to deal with improvisation, while avoiding the "cowboy" mentality of excessive risk-taking is a difficult issue for all volunteer programs. Patients frequently have had little medical evaluation, and may be malnourished, anemic, or harbor previously-undiagnosed congenital abnormalities. Equipment may consist of obsolete donations from other countries, or be of unfamiliar local manufacture. Given the lack of replacement parts, non-standard improvisations are common. Anesthetic Techniques may be limited, requiring the use of agents under suboptimal circumstances (such as halothane in a malnourished, dehydrated child). Surgical safety can be an issue when the itinerant surgeon attempts an extensive procedure with inadequate consideration for monitoring, bloodbanking, ICU availability, or post-operative analgesia in an unmonitored environment. Modifications of standard surgical plans are frequently necessary to assure acceptable, rather than optimal, results in austere settings. Assessment of outcomes (quality assurance) is not commonly applied to MSA anesthesia care, and the nature and

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Anesthesia in the Developing World

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didactic materials throughout lengthy educational visits. Committee members agreed that this would be a very useful resource. Raz Samandari, Joyce Phillips, Alan Klein, and Paul Samuels will work on further recommendations.

In similar vein, it was noted that some organizations have difficulty recruiting skillful anesthesiologists to care for their pediatric patients during programs abroad. At the same time, practitioners have difficulty identifying suitable programs with which to volunteer. The committee agreed to support a joint project in progress between Johns Hopkins and SPA to create a data base of charitable organizations requiring volunteer medical professionals for service abroad. A questionnaire will be sent to organizations and the information compiled for the SPA website.

Finally, there was considerable discussion about maintaining "first world" standards of practice in charitable medical service trips. Most discussants felt there is little reason

general anesthesia on any trip shouldn't meet a minimal monitoring standard of stethoscopy, pulse oximetry, and capnography given the lightweight equipment now available. However, this does not answer many issues, such as what standards are applicable to local host-country practitioners, either during the service project, or afterwards. It was suggested that our committee might offer a consensus statement about methods, problems, and practice guidelines for general anesthesia in children for medical services abroad. Information about temporary licensing and credentialing might also be included. Joe Tobias, Alan Klein, Raz Samandari, and Quentin Fisher expressed interest in drafting a proposal for a committee consensus statement. SPA members with an interest in this area should contact Dr. Tobias.

From these two sessions, it appears that SPA members have considerable interest in anesthesia in developing countries, and that the expertise of SPA's members can contribute much to promote good anesthetic care for children in resource-deficient parts of the world.

New Members

Abe, Margherita C., MD, Lubbock, TX
Aladjem, Eva V., MD, Charlotte, VT
Alikhani, Shahriar, MD, Mission Viejo, CA
Angelino, Giovanni, MD, R.Ph, Chappaqua, NY
Arlia, Michael F., MD, Mount Kisco, NY
Arroyo, Christopher X., DO, Briarcliff Manor, NY
Baer, Barry A., MD, Chappaqua, NY
Benca, Joan F., MD, Wyoming, OH
Bosenberg, Adrian T., MD, Pinetown, South Africa
Brundidge, P. Kaye, MD, Tustin, CA
Buchholz, Elizabeth L., MD, Austin, TX
Buchholz, William A., MD, Austin, TX
Call, Gary D., DO, Blackfoot, ID
Chalkind, Michael, MD, McLean, VA
Chiavacci, Rosetta, RN, Philadelphia, PA
Cox, Thomas E., MD, Cape Girardeau, MO
Crichlow, Linda A., MD, Mount Vernon, NY
Cross, John S., MD, Los Angeles, CA
D'Aust Garcia, Michael, , Norristown, PA
Dadson, Jesse J., MD, Pearland, TX
Dargie, Colleen M., MD, Farmington Hills, MI
Davis, Lionel, MBBS, London, United Kingdom
DeCourse, James P., DO, Overland Park, KS
Doyle, Diana L., MD, Omaha, NE
Egebo, Kim, MD, Arhus N., Denmark
Enriquez, Ron P., MD, New Orleans, LA
Entwistle, Lucy M., MD, Edmonton, AB, Canada

Farlo, Joseph Nicholas, MD, Manhattan Beach, CA
Fazi, Lisa, MD, Philadelphia, PA
Feinstein, Robert, MD, PhD, St Louis, MO
Goncaer-Mitchell, Audrey L., MD, Sylvania, OH
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Katari, Venkata, MD, South Salem, NY
Kaylan-Masih, Arun S., MD, Bedford, NY
Khan, Lubna C., MD, Pittsburgh, PA
Kierce, Jeannette F., MD, Richmond, VA
Kim, Tae W., MD, Houston, TX
Knudsen, Wendy P., MD, Portland, OR
Koller, John P., MD, Edmonton, AB, Canada
Kovarik, W. Daniel, MD, Portland, ME
Krock, Jeremy L., DO, Peoria, IL
Kumar, Ashok R., MD, Wheeling, WV
Lau, Serena W., MD, Chattanooga, TN
Matsumura, Jerry S., MD, Reno, NV
Maunuksela, Eeva-Liisa, MD, PhD, Helsinki, Finland
McKay, Ralph J., MD, Statesville, NC
McRae, Valerie A., MD, Iselin, NJ
Miguelino, Ricardo A., MD, Red Bank, NJ

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Literature Reviews

Apnea Following Spinal Anaesthesia in Two Former Pre-term Infants.

Tobias JD, Burd RS, Helikson MA *Canadian Journal of Anaesthesia* 1998; 45: 985-989.

Review: The authors describe the occurrence of apnea and bradycardia following the administration of spinal anesthesia for inguinal herniorrhaphy in two former premature infants. The procedure was performed when the infants were 38 weeks post-conception, and neither infant had a history of apnea or bradycardia in the 4 preceding weeks. Anesthesia was established with spinal tetracaine with epinephrine, and neither patient received any supplemental anesthetic agent aside from atropine. Clinically significant apnea with bradycardia was noted intra operatively in both situations 5-10 minutes after administration of intrathecal tetracaine. The first patient also had an episode of apnea and bradycardia requiring manual stimulation and oxygen administration for resolution 8 hours following the procedure. The second patient had three additional intra operative episodes of apnea and none postoperatively. This report differs from previous studies showing unsupplemented spinal anesthesia to be free of intra- and postoperative side effects. The authors conclude that apnea is still a risk following spinal anesthesia in preterm infants and these patients should not be discharged same day.

Comments: These case reports help to elucidate a very controversial topic in pediatric anesthesia. There are many anesthesiologists and payors who would like to eliminate a costly postoperative stay for ex-premature infants. A spinal anesthetic without sedation is seen as a method to avoid this. While this method does definitely decrease the incidence of apnea and bradycardia, it does not eliminate it. Thus, as this article recommends, peri-operative monitoring for episodes of apnea and bradycardia is still required even if the former preterm infants undergoes spinal anesthetics without sedation.

Reviewer: Jeffrey Gallinkin, MD
Children's Hospital of Philadelphia

Laser Stimulation of Acupuncture Point P6 Reduces Post-operative Vomiting in Children Undergoing Strabismus Surgery.

Schlager A, Offer T, Baldissera I. *British Journal of Anaesthesia* 1998; 81:529-532.

Review: The authors conducted a double-blind, randomized, prospective, placebo-controlled trial comparing low-level laser stimulation of acupuncture point P6 versus placebo in reducing postoperative vomiting in 40 ASA I or II patients between the ages of 3-12 years undergoing strabismus surgery. The P6 point is located at the wrist between the tendons

of the palmaris longus and flexor carpi radialis and 2 patient thumb widths from the distal palmar crease. The patients were randomized to a therapy or a placebo group. In the therapy group, patients received stimulation the P6 acupoint for 30s with a 10mW, 670nm diode laser with continuous beam 15 minutes prior to induction and 15 minutes after arriving in the recovery room. The placebo group received a sham treatment where the laser was held over the P6 acupoint but not turned on. The patient, parent or observer could not tell if the beam was activated. The perioperative anesthetic management was otherwise standardized for both groups.

Vomiting was significantly less in the acupuncture group (25% vs. 85%) in the first 24 hours after surgery. The authors noted that their incidence of vomiting in the acupoint stimulation group was similar to that seen with other antiemetic agents (i.e. ondansetron) in previous studies of children undergoing strabismus repair. Thus, the authors conclude that P6 laser stimulation is an effective antiemetic with no known side effects and has similar efficacy to well established antiemetic agents.

Comments: Acupuncture for the control of postoperative vomiting has usually not been successful in children as it seems to be important that the stimulation be performed with the patient awake. Children fear needles and this makes preinduction acupuncture difficult to perform. This laser permits painless acupoint stimulation in the awake child and this may be an easy to use, non-invasive, non-pharmacologic technique for reducing vomiting. Acupuncture has a greater effect on nausea than on vomiting. We now need studies comparing the efficacy of this technique with antiemetics such as ondansetron, metoclopramide and droperidol.

Reviewer: Jeffrey Gallinkin, MD
Children's Hospital of Philadelphia

Free and Total Bupivacaine Plasma Concentrations After Continuous Epidural Anaesthesia in Infants and Children

Luz G, Wieser CH, Innerhofer P et. al. *Paediatric Anaesthesia* 8: 473, November 1998

Review: The authors measured free and total plasma bupivacaine concentrations in 14 infants and children (6 days-9 years of age) undergoing epidural anesthesia for pain relief after urologic, abdominal, or orthopedic surgery. All subjects received an initial epidural bolus dose of 0.25% bupivacaine 0.5ml/kg followed one hour later by an infusion initially of 0.25% bupivacaine at 0.25ml/kg/hr for one hour. The concentration was then reduced to 0.125% and the infusion continued for an additional 6 hours (total bupivacaine dose over 8 hours=3.75mg/kg). Venous blood samples were drawn at 5, 8, 9, 10, 12, and 14

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Literature Reviews Continued

hours after the initial bupivacaine bolus dose for measurement of total and free plasma bupivacaine concentrations. Plasma alpha 1-acid-glycoprotein (AAG) levels were measured at the end of the bupivacaine infusion. Plasma protein binding (PPB) was calculated.

Patients were allocated to 2 groups (under 6 months of age and > 6 months) for evaluations of results. While total plasma bupivacaine concentrations were not significantly different between the 2 groups, free plasma concentrations were higher in the infants under 6 months of age compared to older children ($p < 0.05$ at 8 hours after initial bolus). PPB was significantly lower in infants than in children ($p < 0.05$ at 8 and 9 hours). While no patient experienced signs of severe CNS toxicity, the authors reported jitteriness and irritability in 4/7 infants after 7 hours of bupivacaine infusion. The 2 neonates who experienced the highest levels of free plasma bupivacaine concentration experienced no neurologic symptoms, likely due to the effect of midazolam administered to these infants during postoperative ventilation. The authors recommended the use of lower concentrations of bupivacaine in infants under 6 months of age.

Comments: These data highlight the importance of using the minimal effective dose of a drug to achieve a desired therapeutic effect. While the dosage of bupivacaine was well within the recommended range, infants under 6 months of age experienced higher plasma free bupivacaine concentrations with associated side effects. The authors' recommendation to use lower concentrations of bupivacaine is consistent with the practice at our institution where dilute solutions of bupivacaine (0.0625%-0.1%) are used for epidural infusion in the initial postoperative period and the volume and concentration adjusted on the basis of pain relief.

Reviewer: Shobha Malviya, MD
University of Michigan Medical Center

Comparison of Three Techniques for Induction of Anaesthesia with Sevoflurane in Children

Dubois, MC, Piat, V, Constant I, et al. *Paediatric Anaesthesia* 9:19, January 1999

Review: This study compared three different induction techniques using sevoflurane in 65 children (2-10 yrs of age) undergoing tonsillectomy:

1. Incremental induction with sevoflurane in 100% O₂
2. A rapid technique using 7% sevoflurane in 100% O₂, or
3. A rapid technique using 7% sevoflurane in an O₂:N₂O (50:50) mixture.

All children were premedicated with rectal midazolam (0.3 mg/kg) prior to induction. Induction characteristics including mask acceptance, time to loss of eyelash reflex, airway complications, time and quality of endotracheal intubation, and change in vital signs were recorded by an observer.

Patient demographics were similar in the three groups studied. Mask acceptance was noted as good or acceptable in 86-100% of cases with no significant differences between groups. The authors reported a high but similar incidence of airway obstruction in all 3 groups (43-60%) that required insertion of an oropharyngeal airway. However, no patient in any group experienced oxygen desaturation below 97%, laryngospasm or bronchospasm. Agitation occurred more frequently in the high concentration sevoflurane group in O₂ alone (57%) compared with 27% and 25% in the other two groups but this difference was not statistically significant. Time to loss of eyelash reflex was shortest in the high concentration sevoflurane in O₂:N₂O ($p < 0.001$) however, the time to endotracheal intubation was not significantly different between groups. Lastly, heart rate and systolic arterial pressure increased by 30% or more above baseline values in 30-50% of patients. The authors conclude that the addition of N₂O to a high sevoflurane concentration results in shorter time to loss of eyelash reflex and a reduced incidence of excitement with no increase in respiratory complications or hypoxemia.

Comments: As expected, the addition of N₂O to the inhaled gas mixture during induction with sevoflurane speeds the onset of induction with a lower incidence of excitement during induction. The increase in heart rate and blood pressure as noted in this study permit cardiac output to be maintained during induction of anaesthesia. These hemodynamic effects, combined with the rapid onset of anesthetic induction and ready acceptance of sevoflurane make this technique desirable, particularly in anxious, unpremedicated children without established intravenous access.

Reviewer: Shobha Malviya, MD
University of Michigan Medical Center

Postdural Puncture Headache in Paediatric Oncology Patients.

Burt N, Dorman BH, Reeves ST et al. *Canadian Journal of Anaesthesia* 1998; 45: 741-745.

Review: This prospective study determined the incidence of postdural puncture headache (PDPH) and atypical headache in 128 consecutive oncology procedures in 66 patients. Patients were subdivided into 4 groups based on age (preteen and adolescent) and the oncological procedure (lumbar puncture or bone marrow aspiration). A total of 99 lumbar punctures and 29 bone marrow biopsies were performed in 66 patients who

Literature Reviews Continued

received monitored anesthesia care with midazolam-ketamine or midazolam-atropine-propofol administered prior to the procedure. The incidence of PDPH, atypical headache, behavior and appetite were recorded in the immediate postoperative period, 1, 3, and 5 days post-operatively by an anesthesiologist blinded to the procedure done. The bone marrow biopsy group was used as a control group (undergoing an anesthetic but not a lumbar puncture).

PDPH occurred in 5.7% of preteen and 17% of adolescent subjects undergoing lumbar puncture but not in any subject undergoing bone marrow biopsy. There were no significant differences in the incidence of atypical headache in each of the four subgroups.

Comments: This study demonstrates that PDPH does occur in children and is different from atypical headache. The study can be criticized based on the small sample size of the "control" group and the fact that many of the patients were enrolled on multiple occasions. However, this study does remind physicians that even children can develop PDPH and anesthesiologists need to educate their pediatric colleagues about this complication.

Reviewer: Jeffrey Gallinkin, MD
Children's Hospital of Philadelphia

The Effectiveness of Clonidine as an Analgesic in Paediatric Adenotonsillectomy.

Reimer EJ, Dunn GS, Montgomery CJ et al. *Canadian Journal of Anaesthesia* 1998; 45:1162-1167.

Review: This double-blind, randomized, prospective study examined the efficacy of clonidine as an analgesic in 36 ASA I-II children between the age of 7-12 undergoing tonsillectomy. Patients received either 4g/kg of clonidine (a centrally acting non-opioid analgesic) p.o. or a placebo 60-90 minutes prior to surgery. Patients who received clonidine received an intra operative placebo, while the control group received a single intra operative dose of fentanyl 3g/kg iv, during a standardized anesthetic that included intra operative infiltration of both tonsillar fossae with local anesthetic. Pre-operative sedation, anxiety and dizziness were assessed by an observer, along with heart rate and blood pressure. Postoperative pain was assessed by patient self-report using a 10 cm VAS and the analgesic requirement recorded.

Patients receiving clonidine were significantly more sedated and had lower mean arterial blood pressures in the preoperative period than those who received placebo, but there were no significant differences were noted in postoperative analgesic needs or self-reported pain scores, side effects, patient and parental satisfaction. The authors conclude that oral clonidine is an effective analgesic and sedative for children undergoing tonsillectomy.

Comments: Clonidine has been shown to be an effective premedicant and reduces perioperative analgesic requirements. This study has confirmed the efficacy of clonidine for preoperative sedation compared to placebo but the authors did not compare the efficacy of clonidine to midazolam, a drug used far more commonly for sedation. The potential for hypoxemia with sedation in patients with sleep apnea remains a legitimate concern. The authors chose to give intra operative fentanyl to all patients in their control group and failed to show any differences in the postoperative analgesic requirements between the two groups. However, the authors admit they failed to obtain data on the total analgesic requirement for the entire 24-hour postoperative period. A larger sample size and a closer tabulation of postoperative pain scores and analgesic requirements would have made this a much better study. Thus, further study is needed to determine if clonidine is a better alternative to currently used premedications and whether the use of clonidine does indeed reduce postoperative analgesic requirements.

Reviewer: Jeffrey Gallinkin, MD
Children's Hospital of Philadelphia

A Comparison of Active and Simulated chiropractic Manipulation as Adjunctive Treatment for Childhood Asthma.

Jeffrey Balon, MD, Peter D. Aker, DC, Edward R. Crowther, DC, et al. *N Engl J Med* 1998; 339 (15):1013-20

Review: As witnessed by the inclusion of a general anesthesia lecture on the use of complimentary and alternative medicine (CAM) at the recently held Winter SPA/AAP Meeting in Las Vegas, interest in the use of various forms of CAM in our daily anesthesia and pain medicine practice is growing. This article reported on the findings of a Canadian study examining the benefits of chiropractic manipulation for childhood asthma.

The theory put forth in the chiropractic literature holds that vertebral subluxation results in nerve root and adjacent spinal nerve compression with reflex irritation. This persistent mechanical and neurologic disturbance reportedly results in neurogenic inflammation, with attendant altered chest wall mechanics and airway motor tone. Correction of the vertebral subluxation via manipulation should for a period of four months. Patients in both study groups received between 20 and 36 treatments, at regular but decreasing intervals. All were continued on their conventional asthma medications strictly on a prn basis, with a course of corticosteroids allowed for a severe exacerbation as determined by a blinded pulmonologist.

(Continued on page 20)

Comments: The primary outcome variable was the change in baseline morning peak expiratory flow, before the use of bronchodilator, at two and four month intervals. The investigators observed small increases (between 7 and 12 liters per minute) in peak expiratory flow in both study groups, with no significant difference between the two groups expiratory pattern at the 2 month interval ($P=0.49$) or at the 4 month interval ($P=0.82$). Of interest, symptoms of asthma and the use of beta-agonists decreased in both groups, while the self-reported quality of life increased in both groups, during the course of the study.

The authors concluded that in children with mild to moderate asthma, the addition of chiropractic spinal manipulation appears to offer no additional medical benefit.

Reviewer: Thomas R. Vetter, M.D.
*Children's Hospital Medical Center of Akron
Akron, OH*

New Members

(continued from page 16)

Millsbaugh, Daniel L, MD, Leawood, KS
Moro, Michele A., MD, Albuquerque, NM
Mullin, Anthony M., BME, Florissant, MO
Norwood, Patricia A., MD, Dallas, TX
O'Brien, Jennifer Ann, MD, New York, NY
Oakes, Elizabeth, MD, Portland, OR
Olsen, Kirsten H., MD, Lystrup, Denmark
Parsaei, Shekofeh, M.D., Lisle, IL
Pasricha, Shital K., MD, Port Washington, NY
Patt, Michael A., MD, Bloomfield Hills, MI
Puschett, Mitchell I., MD, El Paso, TX
Ramirez, Antonio M., MD, Spring Valley, IL
Ramirez, Rigoberto, MD, Temple, TX
Salib, Michel, MD, Yorkton, SK, Canada
Savani, Yashesh R., MD, Iowa City, IA
Smith, Todd A., MD, Phoenix, AZ
Sohn, Young Z., MD, Los Angeles, CA
Solgonick, Rodney M., MD, Plattsburgh, NY
Spaeth, James P., MD, Loveland, OH
Stein, Mark H., MD, Stirling, NJ
Stewart, Frank C., MD, Norfolk, VA
Sun, Kristin A., MD, Jamaica Plain, MA
Swan, Jan K, MD, Amarillo, TX
Szpisjak, Dale F., MD, Fairfax, VA

AAP News

What started out as a "trial" joint meeting between the SPA and AAP Section on Anesthesiology five years ago has evolved into an annual event. The collaboration has been positive for both organizations and has provided a starting point for many joint ventures. To that end, the leadership of the AAP Section on Anesthesiology and SPA will be exploring the feasibility of a joint dues structure to facilitate membership in both organizations. The AAP Section on Anesthesiology welcomes board certified as well as board eligible anesthesiologists who devote at least 50% of their time to anesthesia care of infants and children. There are several membership categories for anesthesiologists who are not board certified in pediatrics.

The mission of the AAP Section on Anesthesiology is to improve the quality of health care for children and serve as the voice of pediatric anesthesia to the pediatric community. This is accomplished by: (1) conveying issues about the quality of health for children relevant to anesthesiology through the AAP to government agencies, (2) educating pediatricians, surgeons and other medical specialists on issues related to anesthesia (3) participating in the AAP educational programs and (4) advancing the clinical practice of pediatric anesthesia by serving as a forum for the presentation of research and new developments.

The AAP Committee on drugs has a representative from anesthesiology who is involved in interfacing with the FDA and industry in providing appropriate testing and labeling of drugs for children. This group recently was involved in selecting 20 drugs to receive special pediatric labeling. The Section on Anesthesiology was instrumental in working with the task force on circumcision to write a new policy statement that requires anesthesia during infant circumcision. The Committee on Quality Assurance has published "Guidelines for the Pediatric Perioperative environment" which will serve as a resource in setting up appropriate environments for administering anesthesia in those institutions without specific pediatric anesthesia resources.

Moving forward, the section will embark on several new projects. The Guidelines for Pediatric Sedation are being revised and updated. A program for the implementation of a "medical passport" for foster children is under consideration. A pamphlet for pediatricians and pediatric surgeons on "Your child's anesthesia" is being written for distribution by the AAP to general pediatricians and pediatric surgeons. The section looks forward to the completion of these projects and future collaborations with SPA.

Lynn R. Ferrari, MD
*Chair, Section on Anesthesiology
American Academy of Pediatrics
Children's Hospital, Boston, MA*

13TH ANNUAL MEETING OF THE SOCIETY FOR PEDIATRIC ANESTHESIA

Society for Pediatric Anesthesia



Friday, October 8, 1999

Wyndham Anatole Hotel
Dallas, Texas

Lynn D. Martin, M.D.
Program Chair

This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education through the joint sponsorship of The Society for Education in Anesthesia and the Society for Pediatric Anesthesia. The Society for Education in Anesthesia is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

SPA 13th Annual Meeting Program

Dallas, Texas

Morning Session

- 7:00 - 7:45am Registration / Continental Breakfast
- 7:45 - 8:00 am Welcome and Introductory Remarks
Steven C. Hall, MD; Lynn D. Martin, MD
- 8:00 - 10:00 am **Scientific Advances in the Neurobiology of the Neonate**
Moderator: Jayant K. Deshpande, MD
- 8:00 am *Plasticity of the Neonatal Brain*
Michael V. Johnston, MD
- 8:50 am *Pharmacologic Plasticity of the Brain Opioid Tolerance*
Santhanan Suresh, MD
- 9:40 am *Questions and Discussion*
- 10:00 - 10:30 am Coffee Break / Exhibit Viewing
- 10:30 am - 12 Noon **Advances in Neonatal Care**
Moderator: David Polaner, MD
- 10:30 am *Sequela of Prematurity in the 1990's*
Claire Brett, MD
- 11:05 am *Anesthetic Implications of Prematurity in the 1990's*
Peter T. Rothstein, MD
- 11:40 am *Questions and Discussion*
- 12:00 - 1:30 pm Luncheon / Exhibit Viewing

Afternoon Session

- 1:30 - 3:00 pm **Pediatric Anesthesia in the Next Millennium**
Moderator: Peter J. Davis, MD
- 1:30 pm *Total Intravenous Anesthesia - the only way to go!*
Gregory B. Hammer, MD
- 1:55 pm *Inhalational Anesthesia - perfect for every case!*
Jerrold R. Lerman, MD
- 2:20 pm *Regional Anesthesia - the ultimate anesthetic!*
Myron Yaster, MD
- 2:45 pm *Questions and Discussion*
- 3:00 - 3:30 pm Coffee Break / Exhibit Viewing
- 3:30 - 5:00 pm **Contemporary Management Issues**
Moderator: Jeffrey P. Morray, MD
- 3:30 pm *Pediatric Anesthesia for the Next Millennium: The Rest of the World*
Adrian T. Bosenberg, MD
- 4:00 pm Questions and Discussion
- 4:15 pm *Topic: JFK Assassination Conspiracy - Fact or Fiction?*
Jim Marrs
- 7:00 - 10:00 pm **SPA Buffet Reception: Dallas World Aquarium**

SPA Buffet Reception at Dallas World Aquarium

Members should plan on making their participation complete at the Society for Pediatric Anesthesia 13th Annual Meeting by attending the highly popular SPA Annual Meeting Buffet Reception. The reception will be held from 7:00 - 10:00 pm at the Dallas World Aquarium. The cost of this event is included in the SPA Annual Meeting Registration fee. Tickets for spouses or guests may be purchased in advance at the cost of \$50.00 per person. Please check the appropriate box on the registration form and include the proper remittance with your registration fee. Shuttle buses will provide roundtrip transportation from the Wyndham Anatole Hotel.

SPA's Buffet Receptions have become a popular tradition at the Annual Meeting. Early registration for this event is strongly encouraged. Space is limited.

SPA 1999 Annual Meeting Registration Form

October 8, 1999, Wyndham Anatole Hotel, Dallas, Texas

PLEASE PRINT OR TYPE INFORMATION

Name _____ Degree _____

Address (Checks Preference): () Home () Business

City / State / Zip _____

Phone () _____ Fax () _____

Email _____

Hospital Affiliation _____

Business Telephone () _____

- * () I plan to attend the SPA Buffet Reception
 () I plan to bring a guest with me to the Buffet Reception

Registration Fees: Registration fee includes meeting syllabus, continental breakfast, luncheon, breaks and buffet reception.

	Thru Sept. 10	After Sept. 10	
SPA Members, includes Resident Members ¹	\$175	\$200	\$ _____
Non SPA Members ² (U.S. or Canada)	\$275	\$300	\$ _____
<i>(includes \$100 immediate SPA membership).</i>			
International Nonmember ³	\$225	\$250	\$ _____
<i>(includes \$50 immediate SPA membership).</i>			
*Extra Buffet Reception Tickets	\$50	\$60	\$ _____
^{1, 2, 3} To subscribe to <i>Anesthesia & Analgesia</i>		\$110	\$ _____
<i>(includes membership in IARS)</i>			
Optional Airmail Journal Delivery Overseas		\$167	\$ _____
Optional Airmail Journal Delivery Canada		\$75	\$ _____
Educational/Research Fund (<i>SPA is a 501(c)3 organization and donations are</i>			\$ _____
<i>tax deductible as allowed by law. All contributions will be acknowledged.)</i>			
TOTAL			\$ _____

Payment

Check Enclosed Visa MasterCard AMEX

Card Number _____ Expire _____

Signature _____

Refund Policy

Full refund less \$50 administrative fee through August 6, 1999; 50% refund August 7-Sept. 10, 1999; No refunds after Sept. 10, 1999. Refunds determined by date written cancellation is received.

Make Check payable to the **Society for Pediatric Anesthesia** and mail to:

Society for Pediatric Anesthesia, P.O. Box 11086, Richmond, Virginia 23230-1086

Phone (804) 282-9780 • Fax (804) 282-0090

Email spa@societyhq.com • Website www.pedsanesthesia.org

Hotel reservations must be made through the ASA. The telephone and fax numbers for ITS are as follows:

Phone: 800-974-7916, 847-940-2155 (outside the US); Fax: 800-521-6017, 847-940-1364 (outside the US)

Membership Application



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 Phone (804) 282-9780 • Fax (804) 282-0090
 Email spa@societyhq.com

SPA MEMBERSHIP #: _____ PLEASE MAKE MY MEMBERSHIP EFFECTIVE: JANUARY 19____ OR JULY 19____.

Name (Last) _____ (First) _____ (MI) _____		<input type="checkbox"/> M.D. <input type="checkbox"/> D.O. <input type="checkbox"/> Ph.D.
PREFERRED MAILING ADDRESS <input type="checkbox"/> This is my Home Address, <input type="checkbox"/> This is my Business Address		SSN#s _____
CITY _____	STATE/COUNTRY _____	ZIP/POSTAL CODE _____
OFFICE PHONE _____	FAX _____	EMAIL _____
DATE OF BIRTH _____ Month / Day / Year	TYPE OF PRACTICE <input type="checkbox"/> PRIVATE <input type="checkbox"/> UNIVERSITY <input type="checkbox"/> GOVERNMENT <input type="checkbox"/> OTHER:	
HOSPITAL AFFILIATION _____		
ACADEMIC DEGREES AND OTHER PROFESSIONAL CERTIFICATION W/DATES _____		

I HEREBY MAKE APPLICATION FOR:

ACTIVE MEMBERSHIP (PHYSICIAN)*:

- SPA Membership \$100.00
- SPA membership with subscription to ANESTHESIA & ANALGESIA, includes joint membership in IARS \$210.00

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- SPA Membership \$100.00
- SPA membership with subscription to ANESTHESIA & ANALGESIA, includes joint membership in IARS \$210.00

INTERNATIONAL MEMBERSHIP*:

- SPA Membership \$50.00
- SPA membership with subscription to ANESTHESIA & ANALGESIA, includes joint membership in IARS \$160.00

* For additional information on optional joint membership with the Society of Cardiovascular Anesthesiologists and the Society for Ambulatory Anesthesia contact the IARS office at (216) 642-1124.

RESIDENT MEMBERSHIP: Residency Membership Requires Endorsement By Program Director (Please complete the below section on Residency)

- INCLUDES MEMBERSHIP IN SPA, IARS, SCA, AND SAMBA \$70.00

Residency Location _____

Residency Completion Date _____ Signature of Program Director _____

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Continuing Medical Education Needs Assessment

The Society asks that you give consideration to topics you would like to have addressed in future educational offerings.

1. What topics would you like to see addressed at future annual/winter meetings?


- | | |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

2. Do you like workshops at the winter meeting?

Very Much - - - **Not at All**
1 2 3 4 5

3. If you like workshops, which topic would you like to see included:

- | | |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

 a. Would you be interested in separate workshops during the year?

Very Much - - - **Not at All**
1 2 3 4 5

b. Would you like the meeting to be co-sponsored with another organization (i.e., critical care, neurology, etc.)?

Very Much - - - **Not at All**
1 2 3 4 5

5. Additional comments and suggestions: _____

Mail / Fax to:

SPA
P.O. Box 11086 / 1910 Byrd Ave., Suite 100, Richmond, VA 23230-1086
phone (804) 282-9780 / fax (804) 282-0090
Email: spa@societyhq.com

Society for Pediatric Anesthesia



Benefits of Membership

- Two annual educational programs with reduced registration fees for members,
- Pediatric Anesthesia Fellowship Programs,
- Research Funding,
- SPA Newsletters containing current literature reviews, meeting summaries, invited mini-reviews on important and controversial topics, and updates on political matters of relevance to pediatric anesthesia,
- Website for current Society information,
- Plus Lots More!



www.pedsanesthesia.org

Positions Available

Albany Medical College

Albany Medical College is searching for a full time pediatric anesthesiologist to head the division, and serve as the director of the pediatric fellowship program. Applications are currently being accepted at the Instructor to Associate Professor levels. The successful candidate should be BC/BE, have experience in providing anesthesia for adults and children for general surgery, as well as for pediatric cardiac surgery including transplants. The Albany Medical Center currently consists of four pediatric anesthesiologists providing the majority of the 2,600 anesthetics to children each year. All pediatric surgical subspecialties are represented. Your efforts in research, clinical care and education will be appreciated. Our collegial group enjoys a competitive salary package and the Albany Medical College is an equal opportunity employer. For consideration please forward CV to: Kevin W. Roberts, MD, Professor and Interim Chairman, Albany Medical College, Department of Anesthesiology, 131, 47 New Scotland Avenue, Albany, NY 12208; Phone: (518) 262-4305; Fax: (518) 262-4736.

Children's Medical Center of Dayton, OH

We are currently searching for a Pediatric Anesthesiologist to join our well established, private practice group at Children's Medical Center of Dayton, Ohio. Candidates must be BC/B with strong preference to pediatric fellowship-trained individuals. Currently, seven physicians and two CRNAs provide care to over 9000 cases per year. No cardiac or transplantation. Diverse caseload including neonatal, major orthopedic and scoliosis surgery, busy neurosurgical and reconstructive craniofacial in addition to ENT, urology, plastics and peds gastroenterology. Compensation package includes health, disability and professional liability and life insurances; vacation and CME travel/expenses; generous salary. Dayton area offers excellent housing and school systems. Individuals are asked to forward a copy of their curriculum vitae to Edward J. Walz, M.D./ Director, Anesthesiology /The Children's Medical Center / One Children's Plaza / Dayton, OH 45404-1815 or Fax: ATTN: Dr. Walz, Anesthesiology @ (937) 463-5410. or E-mail to EdWalz620@aol.com

Pediatric Anesthesiologist/New Jersey:

Expanding group of 14 anesthesiologists and 12 CRNAs covering 16,500 surgical procedures at 2 hospitals, 2 surgical centers and endoscopy center, desires a pediatric anesthesiologist to join practice. Affiliated with well-regarded regional healthcare system/trauma center. Fellows welcome. Ideal coastal community. Quality scheduling, schools, and housing. Base/incentive/benefits. Contact: Marcy Murphy, Longshore+Simmons, 625 Ridge Pk, Ste 410, Conshohocken PA 19428. 800-346-8397 or LScorp@ix.netcom.com.



The Children's Hospital, Denver, CO

The Department of Anesthesiology is seeking a Pediatric Anesthesiologist for a full time position available July 1, 1999 through the University of Colorado, Department of Anesthesia. Position would be based at The Children's Hospital, Denver, Colorado. We are looking for an individual who is Fellowship trained, Board eligible with an interest and expertise in Academic Pediatric Cardiac Anesthesia and/or Pediatric Pain. Please forward your inquiries to Dr. Desmond B. Henry, Interim Director of Anesthesia. Phone number (303) 861-6224, fax number (303) 837-2899 or website address: henry.desmond@tchden.org.

The University of Michigan

The University of Michigan, Department of Anesthesiology, Section of Pediatric Anesthesiology is seeking an additional Pediatric Anesthesiologist to keep pace with an expanding case load. This full time faculty position will be at the level of Instructor/Lecturer/Assistant Professor. Applicants must be Board eligible or Board certified in Anesthesiology, with a minimum 1 year fellowship in Pediatric Anesthesiology. CS Mott's Children's Hospital is a tertiary Pediatric Hospital, a level one pediatric trauma center, with 200 beds, and 9 operating rooms. Duties will include perioperative care of healthy and critically ill children, medical student, resident and fellow teaching, and clinical or laboratory research. Interested persons should forward curriculum vitae to Pediatric Anesthesiology, Attn: Paul Reynolds, MD, 1500 E. Medical Center Drive, F3900 Mott Hospital, Box 0211, Ann Arbor, MI 48109. E-mail paulreyn@umich.edu ; Phone 734-763-2435 or fax to 734-763-6651.



Yale University School of Medicine

Yale University School of Medicine is accepting applications for a faculty position at the Assistant Professor level in the Section of Pediatric Anesthesia. The Section provides care to children in all surgical disciplines at Yale-New Haven Children's Hospital and includes active pediatric pain service, resident and fellow education and clinical research programs. Candidates for this position must be BC/BE in anesthesiology and have completed a pediatric anesthesiology fellowship. Send CV to Zeev N. Kain, MD, Chief, Section of Pediatric Anesthesia, Department of Anesthesiology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 208051, New Haven, CT 06520-8021.

Riverdale Anesthesia Associates, PC

Riverdale Anesthesia Associates, PC in the Metro Atlanta Area, a 375-bed hospital is expanding a well-established private practice group (10 anesthesiologists + 14 CRNA's & PA's). Busy and growing pediatric practice. Excellent compensation package and benefits, partnership track, 5 weeks vacation the first year, 6 weeks the second year, and 7 weeks vacation third year. Sign-up bonuses, moving expenses provided. No open hearts or transplants; BC/BE only. Contact Vincent Galan, MD, MBA, Richard Lodise, MD, FACPM at: Phone: (770) 478-9877; or Fax CV to (770) 478-2908

International Conference on Pediatric ECMO Techniques and Technology

November 5 - 6, 1999

Hotel Princess Izmir, TURKEY

A Joint Organization by:

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The Thoracic Unit, Izmir, TR

For information contact: Prof. Dr. Oktay Mutaf, The Thoracic Unit, Ege University Faculty of Medicine, Pediatric Surgery Department, Bornova 35100, Izmir, TURKEY. Tel: +90 232 388 14 12; Fax: +90 232 375 12 88, E-mail: omutaf@med.ege.edu.tr; Internet: <http://www.med.ege.edu.tr/pedsurg/ecmo.htm>

Information, please: medical service abroad.

SPA's Committee for International Education and Service is compiling a database of charitable organizations that utilize medical volunteers (of all kinds, not just doctors or anesthesiologists). It is especially difficult to identify local or regional agencies. Have you been involved with a charitable agency that you think might not be in our database? If so, would you please forward the name and phone number or address. We'll do the rest of the research about the group. We're interested in all groups that provide voluntary service, no matter how small (even if it's run as a personal project by one or two practitioners).

Please send information to Quentin Fisher, MD.
Email: qfisher@welchlink.welch.jhu.edu; fax: 410-614-2911.

Society for Pediatric Anesthesia



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The Society for Pediatric Anesthesia (SPA) was founded in 1987 to promote quality perioperative care for infants and children. Membership in SPA has grown steadily to more than 4000 members. Membership consists of community-based and academic physicians who have an interest in pediatric anesthesia, as well as resident and affiliate members. The goals of SPA include:

1. To advance the practice of pediatric anesthesia through new knowledge
2. To provide educational programs on clinical, scientific, and political issues that are important to pediatric anesthesia practice
3. To promote scientific research in pediatric anesthesia and related disciplines
4. To provide a forum for exchange of ideas and knowledge among practitioners of pediatric anesthesia
5. To support the goals of the American Society of Anesthesiologists and the American Academy of Pediatrics

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