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President's Message

Now that our rainy summer is over and we are all back to work, I would like to report to you on some developments, some of which could have a considerable impact on women's health care.

In 1997, the American College of Obstetricians and Gynecologists (ACOG) convened a Task Force to respond to the once again increasing incidence of cesarean delivery in the United States. The Task Force report entitled "Evaluation of Cesarean Delivery" was released this August and contains some disturbing recommendations that may adversely affect the availability of effective pain relief during labor. In this document, ACOG recommends that epidural analgesia not be initiated prior to 4 cm cervical dilation in nulliparous women and that alternative modalities of pain relief be considered because of a perceived increased risk of cesarean delivery. Unfortunately, an obstetric anesthesiologist was not consulted by the Task Force and, as a result, there are serious flaws in the process by which they arrived at this conclusion. First, the literature cited is incomplete and, by the time the report was finally published, many of the supporting studies were no longer applicable to current practice. The Task Force also considered the results of several retrospective studies, which are seriously flawed by patient selection bias, to support the notion that early epidural analgesia in nulliparous women increases the risk of cesarean delivery. The Task Force ignored several more recent studies, including an NIH metaanalysis, which demonstrate that epidural analgesia does not increase the risk of cesarean delivery in nulliparous and parous women are not cited.

Furthermore, the Task Force was unable to distinguish among the epidural techniques used in the various studies. When one considers the substantial and credible evidence available that epidural analgesia does not increase the cesarean delivery rate, the most alarming and careless recommendation is the "institutions and practitioners with high case adjusted rates of cesarean delivery in nulliparous women with term singleton fetuses with vertex presentation should be reviewed to determine how many of these patient received an epidural when cervical dilation was less than 4 cm". In my view, ACOG has put obstetricians and anesthesiologists in an impossible position between government/third party payors and the women they care for. The ASA President, Dr. Ronald MacKenzie, and I have sent a letter to the President of ACOG voicing our concern with these recommendations and asking that we jointly revisit this issue with them.

On a more pleasant note, I communicated to you in the summer that the Board of Directors had approved a motion to apply for accreditation of the annual meeting by the Accreditation Council for Continuing Medical Education (ACCME). I am happy to inform you that the application, which was filed in August, has satisfied the initial requirements of the ACCME and that the second step, an on-site visit, has just been satisfactorily completed at SOAP headquarters. I hope to be able to report back to you on a successful accreditation in the near future.

The Board of Directors is seeking professional guidance in managing the Society's monetary funds more effectively. An Ad Hoc Committee of the Executive Board met September 28th to hear proposals by fund managers from First Union Securities and Independence Advisors. The Ad Hoc Committee will select a fund manager to present to the entire Board.

The SOAP website, www.soap.org, is fully operational and an invaluable resource for information about the Society and obstetrical anesthesiology. A recent enhancement is that you now have instantaneous access to the membership roster, which will now be updated monthly. This area is password protected and, if you have not already received a user ID and password, please contact the SOAP office. Important information about the joint SOAP-ASRA meeting in Steamboat Springs, February 2001 and the SOAP Annual Meeting in San Diego, April 2001 can also be found on the website. The Board of Directors and standing committees met during the ASA and I will report on this at a future date.

Alan C. Santos, MD, MPH

President
The Blue Line: Editor's Update

Welcome to the Fall edition of the SOAP Newsletter. As I write this column, I have just returned from this year's annual meeting of the ASA. A perusal of the lectures, panels, and abstracts dealing with obstetric anesthesia provides the strongest evidence of the strength of our specialty and our Society.

One of the major functions of this newsletter is to serve as a forum for our members to express their opinions on controversial issues via The Soap Box. In this issue, we have addressed the thorny issue of whether epidural analgesia for labor should be considered a patient right. I encourage our members to weigh in on this perennially controversial topic.

In this issue, you will also find a review of the pathophysiology and management of post dural puncture headache, which I hope you will find both interesting and clinically useful. We will review a number of clinical and basic science topics in the coming months, including the anesthetic management of the pregnant Jehovah's Witness, and the delivery room management of the meconium stained infant.

Finally, a correction. The e-mail address listed in our last issue was incorrect (Sorry, Dr. Pue). My correct e-mail address is dwlody@aol.com.

David Wlody, MD
Editor
New York, NY
dwlody@aol.com
Bylaws Committee Report

Background

At its meeting on May 19, 1999, the SOAP board of directors (BOD) recommended a variety of bylaws changes, which stemmed from the recommendations made by the SOAP long range planning committee. The purpose of the proposed changes was two-fold:

1. To transform SOAP from a relatively small, research-oriented group into a larger, more clinically-oriented society.
2. To make the BOD more representative of our society and more effective.

These bylaws changes were presented to the membership at the Annual Business Meeting and in the Spring edition of the Newsletter. Several of the proposed changes sparked considerable controversy. In response, the SOAP BOD sponsored a morning retreat at this year's ASA meeting to discuss the proposed changes in our bylaws and mission.

Bylaws Retreat

Members of the BOD and approximately 50 other SOAP members attended a morning retreat on October 9, 1999. A lively, wide ranging discussion of the present and future direction of this society followed. The most controversial of the proposed bylaws changes were discussed in detail. Many alternative revisions were proposed. The SOAP BOD held its semi-annual meeting on October 11, 1999 and discussed the preceding events and reassessed the proposed bylaws changes. On the following pages, I have outlined the results of those deliberations. The Bylaws amendments that were approved at the October 1999 BOD meeting will be presented to the membership at the Annual Business Meeting to be held at 3:00 PM on Friday June 2, 2000 during SOAP 2000. Amendments approved by a majority of those Active, Retired and Resident/Fellow members present and voting at the Annual Business Meeting will become effective at the close of that meeting. Remember, you must attend the Annual Business Meeting in Montreal to vote on these proposed bylaws changes.

I am looking forward to a lively debate about these proposed amendments at SOAP 2000. See you there!

Mark C. Norris, MD
Chair, SOAP Bylaws Committee
Email: norrism@notes.wustl.edu
### Annual Business Meeting

**Friday, April 27, 2001**

**12:00 - 1:00 pm**

Hyatt Regency San Diego  
San Diego, California

<table>
<thead>
<tr>
<th>Section</th>
<th>Current Language</th>
<th>Proposed Change May 1999</th>
<th>Proposed Change October 1999</th>
<th>Discussion/Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>PREAMBLE</strong></td>
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</tr>
<tr>
<td>1.1</td>
<td>This organization shall be known as the SOCIETY FOR OBSTETRIC ANESTHESIA AND PERINATOLOGY.</td>
<td><strong>Name Change</strong></td>
<td><strong>Keep current name</strong></td>
<td>Controversial issue at both retreat and BOD meeting. There was strong sentiment at both that we are a society for &quot;Obstetric anesthesia and perinatology&quot; (though not perinatologists). Only proposed alternative names: SOCIETY FOR OBSTETRIC ANESTHESIA, VIRGINIA APGAR SOCIETY, or changing the &quot;P&quot; to &quot;Provider&quot;, &quot;Physician&quot;, etc.</td>
</tr>
<tr>
<td>1.2</td>
<td>This SOCIETY provides a forum for the discussion of medical problems unique to the peripartum period.</td>
<td><strong>This SOCIETY provides a forum for the discussion of medical problems unique to the peripartum period. It promotes excellence in medical care and research in obstetric anesthesia.</strong></td>
<td><strong>This SOCIETY provides a forum for the discussion of medical problems unique to the peripartum period. It promotes excellence in medical care, education and research</strong></td>
<td>The addition of &quot;education&quot; was suggested at the retreat. This &quot;mission statement&quot; reflects both who we are now, but is consistent with an expanded society if that should occur.</td>
</tr>
</tbody>
</table>
5. **MEMBERS OF THE BOARD OF DIRECTORS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5.1</td>
<td>Meeting Hosts: Serve on Board of Directors for a total of four years, the term to end at the close of the Annual Business Meeting the year after their Meeting.</td>
<td>This move will eliminate 2 directors but still allow Meeting Hosts a significant role in the Society.</td>
</tr>
<tr>
<td>5.6.1</td>
<td>Obstetrician: elected, odd numbered years, 2-year term.</td>
<td>Delete</td>
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<tr>
<td>5.7.1</td>
<td>Neonatologist: elected, odd numbered years, 2-year term.</td>
<td>Delete</td>
</tr>
<tr>
<td>5.9.1</td>
<td>Representative (delegate) to the House of Delegates of the American Society of Anesthesiologists: elected by this SOCIETY, 3-year term, must be an active member of the ASA and this SOCIETY.</td>
<td>Delete (See Immediate Past President) These amendments were originally proposed to improve our liaison with ASA. However, the proposed changes conflicted with the ASA bylaws, which require a three-year term for delegates.</td>
</tr>
<tr>
<td>5.9.2</td>
<td>Alternate delegate to the House of Delegates, ASA: elected by this SOCIETY, three-year term, must be an active member of the ASA and this SOCIETY, takes the place of the delegate when and as necessary in the ASA House of Delegates.</td>
<td>Delete (See President-Elect) In addition, there was concern that not all SOAP Presidents would be interested or suitable for the role of delegate. As an alternative, the BOD decided to add the currently elected Delegate to the Executive Committee (See 9.1.1).</td>
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<tr>
<td>Section</td>
<td>Proposal</td>
<td>Reason</td>
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<tr>
<td>5.9</td>
<td>Delete</td>
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</tr>
<tr>
<td>5.11</td>
<td>Director at Large: elected, odd numbered years, 2-year term.</td>
<td>Another very controversial topic. The consensus of both the retreat and the BOD was that the Director at Large position should be used to broaden representation on the SOAP board. Hence, the revised amendment.</td>
</tr>
<tr>
<td>5.11.1</td>
<td>Delete</td>
<td></td>
</tr>
<tr>
<td>8.2.2</td>
<td>The President-Elect shall assume the duties of the President when the President is absent.</td>
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<tr>
<td>Section</td>
<td>Text</td>
<td>Action</td>
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<tr>
<td>8.2.3</td>
<td>Serves in the absence of and in the stead of the Delegate (Immediate Past President) to the House of Delegates of the American Society of Anesthesiologists when necessary.</td>
<td>Delete</td>
</tr>
<tr>
<td>8.3</td>
<td>IMMEDIATE PAST PRESIDENT</td>
<td></td>
</tr>
<tr>
<td>8.3.2</td>
<td>Represents this SOCIETY to the House of Delegates of the American Society of Anesthesiologists as the obstetric anesthesia subspecialty component society of the ASA. Carries out the duties required, using the needs and desires of this SOCIETY as a guide, and with direction from the Board of Directors if indicated.</td>
<td>Delete</td>
</tr>
<tr>
<td>8.7</td>
<td>OBSTETRICIAN AND NEONATOLOGIST</td>
<td>Delete</td>
</tr>
<tr>
<td>8.7.1</td>
<td>The Obstetrician and Neonatologist members of the Board of Directors will serve as liaison between this SOCIETY and their specialty Societies, and encourage cooperation, membership, and participation in this SOCIETY</td>
<td>Delete</td>
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<tr>
<td>Section</td>
<td>Description</td>
<td>Action</td>
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</tr>
<tr>
<td>8.9</td>
<td>DELEGATE TO THE HOUSE OF DELEGATES, AMERICAN SOCIETY OF ANESTHESIOLOGISTS</td>
<td>Delete</td>
</tr>
<tr>
<td>8.9.1</td>
<td>The Delegate represents this SOCIETY as the obstetric anesthesia subspecialty component society of the ASA, and will carry out the duties required, using the needs and desires of this SOCIETY as a guide, and with direction from the Board of Directors if indicated.</td>
<td>Delete</td>
</tr>
<tr>
<td>8.10</td>
<td>ALTERNATE DELEGATE TO THE HOUSE OF DELEGATES OF THE AMERICAN SOCIETY OF ANESTHESIOLOGISTS</td>
<td>Delete</td>
</tr>
<tr>
<td>8.10.1</td>
<td>The Alternate Delegate serves in the absence of and in the stead of the Delegate when necessary.</td>
<td>Delete</td>
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</table>

9. STANDING COMMITTEES

This SOCIETY deems the following committees essential to its mission.

9.1.1 EXECUTIVE COMMITTEE:
Chair: President,
Other members: Immediate Past President, President Elect, First Vice President, Secretary, and Treasurer.

Add: Delegate

Adding the ASA Delegate to the executive committee should improve communication and liaison between the ASA and SOAP and reflects the society’s desire to become more active as an advocate for obstetric anesthesia.
<table>
<thead>
<tr>
<th>Section</th>
<th>Committee</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1.2</td>
<td>Bylaws Committee Report</td>
<td>Duties: to advise the President on matters requiring urgent attention, planning, finances, budgets, etc. Also serves as the nominating committee. All actions must be reported to the Board of Directors at the next meeting.</td>
</tr>
<tr>
<td>9.2.1</td>
<td>Scientific Program Committee</td>
<td>ANNUAL MEETING PROGRAM COMMITTEE</td>
</tr>
<tr>
<td>9.2.2</td>
<td>Chair: President Elect, Vice Chair: Meeting Host, Members: President, Past Meeting Host, Chair Education Committee, Chair Research Committee, and at least three others as appointed by the Chair.</td>
<td></td>
</tr>
<tr>
<td>9.2.3</td>
<td>Duties: Review and judge scientific abstracts, oversee planning the scientific program of the Annual Meeting.</td>
<td>Duties: Review and judge scientific abstracts, oversee planning of the Annual Meeting program.</td>
</tr>
<tr>
<td>9.6.1</td>
<td>Liaison Committee</td>
<td>Government Affairs Committee</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
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<tr>
<td>9.6.2</td>
<td>Duties: to foster communication among this SOCIETY and others of similar or related activities and goals. Duties: <em>Within the realm of what is legally acceptable for a nonprofit organization, this committee will address issues of reimbursement that affect members of the SOCIETY, primarily at the level of state societies of anesthesia.</em> This change reflects the desire of SOAP to more fully represent the concerns of anesthesiologists who provide obstetric anesthesia services.</td>
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<tr>
<td>10.</td>
<td><strong>THE ANNUAL MEETING</strong></td>
<td></td>
</tr>
<tr>
<td>10.1</td>
<td>The Annual Meeting Host and site shall be chosen by a single majority vote at the Annual Business Meeting from a list of alternatives approved by the Board of Directors. <em>10.1 The Annual Meeting site shall be chosen by a majority vote at the Annual Business Meeting from a list of alternatives approved by the Board of Directors.</em> As attendance at our annual meeting grows, the number of suitable meeting sites decreases while the amount of advanced planning required to conduct the meeting increases. This amendment aims to maintain a unique characteristic of SOAP (choosing the meeting site by vote of the members) while insuring an adequate supply of appropriate choices.</td>
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<tr>
<td></td>
<td>This amendment would create a separate election for Meeting Host, which would hopefully increase the number of people willing to serve in this office.</td>
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</tr>
<tr>
<td>10.2</td>
<td><em>10.2 The Annual Meeting Host shall be chosen by a majority vote at the Annual Business Meeting.</em></td>
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</tbody>
</table>

Are You Ready?


What will they think of next? While I was at a previous institution (which shall remain nameless to protect the guilty and the innocent) one of our more adventuresome surgeons did a laparoscopic parathyroidectomy on an unsuspecting patient. When he went to publish it, the reviewers asked him if we had any QA at our institution. Here we go again. The author of this case report describes a novel way to take the arrest out of 2° arrest of labor. Since the patient had an epidural for labor I'm sure we'll see a follow-up advocating this ingenious method for treating the "Thorpe syndrome" (epidural arrest of labor). The next thing you know we'll have to keep crowbars, dog leashes, and basketball nets on our carts (sterile of course). Dr. Harris, is it too late to add a panel in Montreal to discuss the anesthetic implications of this technique?

Gerry Burger, M.D.
Chair, Publications Committee

British Journal of Obstetrics and Gynecology


This study compared the analgesic efficacy of intramuscular pethidine and diamorphine in 69 nulliparous women and 64 multiparous women in labour who requested narcotic analgesia and remained undelivered one hour after trial entry. Nulliparous women were randomized to receive either 150 mg intramuscular pethidine or 7.5 mg intramuscular diamorphine. Multiparous women were randomized to receive either 100 mg intramuscular pethidine or 5 mg intramuscular diamorphine. All participants received the anti-emetic prochlorperazine at the same time. There was better pain relief in the group who received diamorphine at 60 minutes following administration. There was also a lower incidence of vomiting in the group who received diamorphine. The authors concluded that intramuscular diamorphine in labour has some benefits compared to intramuscular pethidine.
Pethidine is also known as meperidine while diamorphine is known as heroin. The authors compared these two medications, citing a need to find an effective intramuscular analgesic. The basis for this study was that lumbar epidural analgesia was only 50-80% effective and that women who received epidural analgesia were more likely to be dissatisfied with the delivery process. The citations for these two claims were from the early 1980's. I was amazed by the bias of these authors and surprised that such comments could be published. However, the authors felt a need to justify a study of intramuscular injections in the 20th Century.


This study queried eighteen women who had been invited to participate in a clinical trial in pregnancy, but who had refused. The design of the trial, the type and style of information available, the manner in which it is conveyed, the timing and process of the invitation and by whom it is made all affect the likelihood of a woman agreeing to take part.

I found this study interesting as it presents a discussion with parturients who refuse to participate in a clinical study. The findings are applicable to anyone who does research in the field of obstetrics. One of the women's primary concerns was the use of medication prior to delivery. This concern must be addressed in the consenting process. Another concern was the risk to the mother did not outweigh any benefit. Another important point to the consent process is to let the parturient know how the results of the study will be beneficial. Finally, another reason for refusal was the people caring for the parturient were not aware of the study. The parturients would discuss matters with their nurse or physician. For a study to be successful, all members of the health care team must be aware of the study and its purpose. These members can be effective recruiters for clinical studies.


This study examined 288 women undergoing elective cesarean section who were randomized to either exteriorization and uterine repair or suture of the uterus in the abdomen. There were no differences between the two groups and no difference with regard to intraoperative complications or pain. The only difference discovered was a reduction in blood loss in the group who had exteriorization of the uterus.

Many studies have examined the sensory level required for cesarean section. The variety in
results was explained by whether the obstetrician exteriorized the uterus. Exteriorization required a higher sensory level, at least T4. This study reported no difference in pain between groups, but did not present sensory levels. I would have been interested to see what level was obtained. All obstetricians in my institution exteriorize the uterus. Based upon these results, it seems that this practice will increase, even in England.

Robert Gaiser, MD
*University of Pennsylvania*
*Publications Committee*
RESEARCH COLUMN

The Research Committee of SOAP, in an effort to assist members in conducting and evaluating research in obstetric anesthesia, presents this column. If you have ideas, suggestions, or questions for future topics, please write, phone, fax, or E-mail me:

Yaakov Beilin, MD
Assistant Professor of Anesthesiology
Mount Sinai School of Medicine
Coordinator, SOAP Research Column
Phone: (212) 241-7467 • Fax: (212) 426-2009
E-mail: ybeilin@smtplink.mssm.edu

Surrogate Endpoints: Illusion and Reality

According to Temple (1995), "a surrogate endpoint of a clinical trial is a laboratory measurement or a physical sign used as a substitute for a clinically meaningful endpoint that measures directly how a patient feels, functions, or survives. Changes induced by therapy on a surrogate endpoint are expected to reflect changes in a clinically meaningful endpoint." In theory replacing a true endpoint by a surrogate endpoint could shorten the duration of the trial or reduce costs. In practice, a surrogate endpoint often gives misleading results. Fleming and DeMets (1996) give many examples where a surrogate endpoint gave a different result from the true endpoint. I offer the following example from the anesthesiology literature. Frank et al (1997) randomized subjects to either routine thermal care or additional supplemental warming. Using as the true outcome morbid cardiac deaths, they found a statistically significant reduction in incidence due to additional supplemental warming. Had they used myocardial ischemia as a short-term endpoint, they would have found no statistically significant difference. Thus surrogate endpoints are often like a mirage. They appear on the research horizon as a promising new endpoint for a trial, but on closer inspection their potential may evaporate. This does not mean that one should give up on the search for surrogate endpoints. Rather a degree of skepticism is in order. Methodology for validating surrogate endpoints is an active area of research in biostatistics. If anyone has data from multiple studies each with a different intervention but the same surrogate and true endpoints, please contact me as I would be interested in trying to validate the surrogate endpoint.

Stuart G. Baker
Mathematical Statistician
Biometry Research Group
National Cancer Institute

References


ACOG's 2000 Compendium of Selected Publications Guidelines for Perinatal Care

ACOG has agreed to offer SOAP members the opportunity to buy two of their publications at a significant discount. The 2000 Compendium of Selected Documents contains approximately 200 documents, including ACOG's Practice Bulletins, Educational and Technical Bulletins, and Committee Opinions, and is offered to SOAP members for $75 plus shipping and handling. Guidelines for Perinatal Care, 4th ed., which is published by ACOG jointly with AAP, provides comprehensive recommendations for care of pregnant patients, their fetuses and newborns. It is offered to SOAP members for $39 plus shipping and handling. To order either or both of these publications, SOAP members should call 800-762-2264, and ask for extension 159.

Marianna Crowley, MD
Chair ASA Committee on Obstetric Anesthesia
Current Review: pathophysiology and management of post-dural puncture headache

It has been just over one hundred years since Dr. Bier experienced and wrote about the first reported postdural puncture headache. Dr. Bier's classic description of his severe postural headache would be familiar to anyone in practice today. A postdural puncture headache (PDPH) or "spinal headache" is usually described as a severe, dull, nonthrobbing pain, usually fronto-occipital, which is aggravated in the upright position and diminished in the supine position. It may or may not be accompanied by nausea, vomiting, visual disturbances and/or auditory disturbances. Patients who experience a postdural puncture headache should not be taken lightly. Data obtained from the ASA's closed claims analysis project show that this is the third most common reason for litigation in obstetric anesthesia. (1) Anyone being treated for a PDPH should receive reassurance as well as a full and frank discussion of treatment options.

A PDPH is usually a self-limiting process. If left untreated, 75% of them will resolve within the first week and 88% will have resolved by 6 weeks. (2) Most treatments are geared towards lessening the pain and symptoms until the hole in the dura can heal, or at least until it can close to the point where the symptoms are tolerable. So-called "conservative treatment" involves hydration, bedrest and analgesics.

The concept of hydration for a PDPH is often misunderstood. The purpose of the hydration is to ensure that the rate of CSF production is appropriate. Although the degree of CSF leak does not correlate with the severity of the symptoms in a PDPH, it is assumed that improvements in the ratio of CSF production to CSF leak will improve the clinical picture. Dehydration can result in a decrease in CSF production. However, if someone is appropriately hydrated, and the rate of CSF production is normal, there is no evidence that overhydration will increase the rate of CSF production any further. Therefore, there is no point in administering fluids to a patient who is already appropriately hydrated.

Bedrest is advised simply to lessen the severity of symptoms. At one time, it was thought that remaining supine after a dural puncture would help prevent the occurrence of a PDPH. This is not the case and the incidence of PDPH is not affected by bedrest. Bedrest is therefore no longer advised unless symptoms occur. When symptoms do occur, the patients are often at bedrest anyway, since it is the only way that they can obtain relief. For a mild PDPH, NSAIDs are often prescribed. For severe headaches, NSAIDs may not be sufficient, and narcotics may be necessary in the initial period. Epidural morphine has been shown to be effective, but is usually not a convenient treatment for an outpatient or a patient waiting to be discharged.

Most of us were taught the classic explanation for the pathophysiology of a PDPH. CSF leaking from a dural puncture would lead to a loss of CSF pressure in the spine and a loss of buoyancy supporting the brain. When the patient assumes an upright posture, the brain sags, and tension on the meninges and other intracranial structures creates the pain seen with PDPH. As Sechzer pointed out in the 1970s, this explanation is probably overly simplified. (3) It is likely that as the body assumes a vertical posture, the hydrostatic gradient across the brain increases, forcing more CSF to exit the dural puncture. The body then attempts to compensate for the loss of intracranial volume by vasodilation. Much of the pain in a PDPH would then be related to vascular distention. This process would reverse itself when the patient again became supine.

This difference in mechanisms is an important one. If some or all of the pain of a PDPH is the result of processes similar to those that occur during a vascular headache, then a PDPH should be susceptible to the treatments used for vascular type headaches. In fact, these treatments have met with varying degrees of success.

Intravenous caffeine sodium benzoate has been in use, off and on, for approximately half a century as a treatment for
PDPH. One regimen was to put 500 mg of caffeine sodium benzoate in one liter of intravenous fluid and infuse this over one hour. It could be repeated every 8 hours. Presumably, the cerebral vasoconstrictive effects of caffeine help attenuate the vascular distention, providing analgesia. While some investigators reported very good results with intravenous caffeine sodium benzoate, others found it to be no better than placebo. These days it is difficult to obtain caffeine sodium benzoate in the United States.

Camann showed that 300 mg of oral caffeine would provide some temporary analgesia, but while the relief was better than placebo, it was often temporary and there was a high recurrence rate. As a practical matter, oral caffeine is not always useful in this situation, since it involves taking multiple 300 mg doses of caffeine throughout the day. A time-release preparation of theophylline worked somewhat better, presumably because of its longer duration of action as well as its more potent vasoconstrictive effect on cerebral vessels. Sumatriptan 6 mg subcutaneously has been very successful in some studies in relieving the pain of a PDPH. It remains to be seen whether the oral form of this medication works as well as the subcutaneous route.

An epidural blood patch (EBP) remains the standard against which all other treatments for a PDPH are compared. By creating a blood clot over the hole in the dura, the CSF leak can be slowed or halted entirely. As with the more conservative treatments, the epidural blood patch buys time. By the time the clot has resolved, the hole has usually reduced in size to the point where the symptoms of the PDPH have either disappeared or become tolerable. Of course, should the clot become dislodged during this period, the headache may return.

The pain relief from an EBP is often immediate. If the EBP worked simply by plugging the dural leak, one would expect that the CSF deficit would take a much longer time to be replenished. Therefore, a second mechanism of action may be at work. It is possible that the EBP also works by increasing pressure in the spinal cord.

When blood patches were first performed, small volumes (3 - 8 ml) of autologous blood were used. These days, the common practice is to use 15 to 20 ml of blood in the patch. This enables a greater spread of the blood through the epidural space to ensure that it covers the dural puncture. With these volumes, the EBP is said to be effective more than 95% of the time. A headache may recur following an EBP, but the EBP is so effective in the treatment of a PDPH, that if the patient fails to obtain any relief, the original diagnosis should be questioned. Headaches that result from other etiologies are sometimes mistaken for a PDPH.

Although the EBP is usually thought of as a benign procedure, it is not without its complications. Fortunately, most of these are relatively minor. Approximately 35% of patients who receive an EBP report back pain. Neck pain, leg pain, paresthesias, radiculitis, fever, and temporary cranial nerve palsies have all been reported following the administration of an EBP. It is not uncommon to obtain a second wet tap when attempting to place an EBP.

Many practitioners have the patient remain in the decubitus position for 30 minutes after placing the EBP before they are allowed to ambulate. There is some evidence that if the patient remains in the decubitus position for longer periods (1 to 2 hours), the EBP might be more successful.

There was a time when EBPs were avoided during the first 24 hours of a PDPH. Their effectiveness during this early stage was thought to be low and the PDPH recurrence rate was believed to be high. Reevaluation of early EBPs in the 1980s and 1990s showed that with the administration of 15 to 20 ml of blood in the patch, the EBP could be very successful during this period. In fact, when an EBP was placed prophylactically for a wet tap before the development of any symptoms, only 10% of the patients developed a headache.

This leads to a treatment dilemma with differing points of view. If a wet tap occurs during the attempted insertion of an epidural catheter, many anesthesiologists believe that a prophylactic blood patch should be inserted to avoid the
development of a PDPH with its distressing symptomatology. Others feel that a patient should not be subjected to the possible complications of an EBP unless a PDPH develops and the symptomatology justifies the risk/benefit ratio.

Other substances besides autologous blood have been used in the epidural space in an attempt to either "patch" the hole in the dura or diminish the CSF leak. Historically, the oldest of these is normal saline, the "saline patch." There have been many regimens proposed for this therapy. One is to inject 40 ml of saline into the epidural space, and follow this with an infusion of 40 ml/hr over the next 12 to 24 hours. Others simply use the initial injection and forego the subsequent infusion. Although effective in the short term, a high recurrence rate of PDPH symptoms is often reported with this method.

Low molecular weight dextran has been used in some studies as a substitute for the EBP. Injecting 20 - 30 ml of dextran has been highly successful in treating the headaches. (12) In one study, a 20 ml of dextran given prophylactically as a "patch" was effective in preventing PDPHs. (13)

Gelatin powder (Gelfoam) and fibrin glue have both been used as epidural patches for postdural puncture headaches. They may be effective, but are significantly more difficult to administer than dextran.

Steve Schwalbe, MD
Education Committee

References:


PRO

Christopher F. Ciliberto, MD
New York, NY

The need for a dedicated anesthesiologist to cover the labor room changes with the times. An analysis of the obstetric work force in 1981 revealed that most analgesia was provided by nurse anesthetists working independently or by obstetricians themselves. Only a small percentage was performed by anesthesiologists, primarily because of the unpredictable nature of the service and unreliable payment for labor analgesia. Availability of anesthesia services was therefore low and many women had no access to regional analgesia at all. By 1992, a survey of the obstetric work force by Hawkins showed a change in obstetric practice, with a decrease in the number of hospitals (especially those with fewer than 500 beds) delivering obstetric care. The shift of obstetric care to larger facilities acts as a two-fold advantage to the anesthesiologist; it increases the number of deliveries in one location and increases the probability of an existing anesthesiology presence by the mere nature of it being at a larger institution. In 1998, Dunbar reported that the lack of epidural service in rural Washington and Montana hospitals limited the obstetric practices at these institutions. The increase in the number of patients at individual institutions, and increasing patient desire for and acceptance of labor analgesia has led to the increased use of regional analgesia and anesthesia overall.

A service with a dedicated provider leads to multiple benefits for both patients and the group of providers. The commitment to provide continuous, consistent obstetric anesthesia and analgesia coverage leads almost automatically to the development of increasing expertise in the area. In any service, the level of care is improved by consistent coverage because an individual or individuals doing obstetric anesthesia on a regular basis become more proficient in the most common techniques, and more familiar with obstetric common problems. He or she also has a greater interaction with the obstetric staff, which allows for anticipation of practice style and knowledge of pertinent issues for both services. The practice of obstetric anesthesia as a whole becomes safer, in that there is a greater utilization of regional analgesia and therefore anesthesia at the time of cesarean section. Hawkins showed that the use of general anesthesia was associated with a higher mortality for cesarean section than that of the use of regional techniques. A dedicated in house individual also is more available to treat a complication after analgesia (both spinal and epidural) happens anywhere from 10 to 40 minutes after the initiation. Some of these complications are easily treated and others may be missed if specific monitoring is not in place. The American Society of Anesthesiologists has...
guidelines for the practice of regional anesthesia in the labor and delivery area which include presence during the administration of any regional anesthetic or analgesic using local anesthetics. In our institution (academic practice) another benefit to a dedicated provider or group is the concentration and focus in obstetric anesthesia that we are able to provide to the residents. Teaching and research efforts are better concentrated when a group is dedicated to one specific area of specialization.

Other than straightforward shortages in manpower, the major obstacle to in-house coverage has been financial. In recent years the use of regional anesthesia in labor has increased. With increased patient awareness more and more insurance companies and HMOs have been forced to cover these analgesics in an effort to maintain subscribers. Certain states, through the lobbying of the physicians, are now reimbursing at a somewhat higher rate than previously for their Medicaid patients. It is important that we not take the position that labor analgesia is only necessary during "business" hours, then HMOs and insurance carriers are very likely to say they are not necessary at all and reimbursement will cease altogether. There is also the issue of our CRNA colleagues who will be more than willing to pick up this pool of patients if they are able to practice independently of physician guidance; to a degree we should be looking to protect our turf.

It seems to me that in the ever-changing medical atmosphere in which we find ourselves at the dawning of a new millennium, capturing the greatest number of patients is only to our advantage. The way to do that is to be able to provide the services that they are requesting. At the same time we need to be able to provide these services as safely as possible to ensure the best possible care, and protect against unnecessary medico legal entanglements. While there exists ASA Guidelines for the safe administration of analgesia and anesthesia to women in labor we should adhere to them as much as possible. If we are able to provide excellent care and increase our caseload we can satisfy what should be our main objectives, to 1) grant relief of the pain of labor, and 2) make a living at it.

References

Epidural Analgesia

To The Editor —

I have been watching the SOAP website with interest, since I attended last year's meeting in Denver. The topic of epidural analgesia, "right or privilege", was the scheduled topic of one of the debates. Unfortunately, the issue was never adequately discussed (probably secondary to an overwhelming concern for political correctness). I think it is about time that someone finally starts this discussion in this forum.

Let me preface my comments by stating that I have the "luxury" of working as a salaried employee, of what is essentially a city supported hospital. We treat all patients, regardless of funding, the same. If a patient requests labor epidural analgesia, and there is no medical contraindication, that service is provided, and in a timely fashion.

Now onto the discussion, and there will be NO political correctness here. Epidural labor analgesia is a privilege, as is almost all medical care in this country. The United States has the privilege of having available the best medical care in the world. Trying to change all of medical care, or any particular medical procedure into a "right", is dangerous and inappropriate. Hillary Clinton failed, and we are all healthier, and in less debt as a result of her failure. Canada has a failing health care system that has essentially bankrupted their country. This is not the goal we should be aspiring to.

Statements by the president of the ASA, and by the president of SOAP, suggesting that it is wrong for a physician to not provide a service, for lack of payment, are damaging to all physicians, and patients alike. We would not expect a restaurant owner, a carpenter, a supermarket owner, a lawyer, or a senator to provide their services for free. Why should physicians? One might suggest that physicians have an ethical obligation. That sounds noble, but the ethical obligation would have to be within the framework of our society, and therefore the society would have an obligation to provide funding to the physicians to provide the services they believed were necessary.
If we insist that physicians continue to provide services for no money, then eventually we will have no physicians. This clearly serves no one.

Physicians provide a large proportion of their care to significantly under funded, or non-funded patients. This was sustainable in the past because there was income from the "well insured". Unfortunately, there doesn't seem to be anyone left that is well insured—the corporate raiders of the HMO's have made sure of that. Millions of dollars go to CEOs of insurance companies, hospitals, and HMOs, none of which is spent on patient care. That is unconscionable.

We need to spend more time assuring that there is appropriate funding for the provision of health care services. We should not be criticizing physicians for expecting to be paid for their services.

Richard Nishman, MD

Denver, Colorado

To the Editor —

We are writing to you from SUNY Stony Brook University Hospital. We are a tertiary care center with approximately 3600 deliveries per year. Currently, our epidural policy requires that the obstetrician be in-house when their patients receive epidural analgesia for labor. We believe that this is the current standard, however some of the obstetricians are questioning the necessity of this. In addition, we will be opening an Ambulatory Surgery Center which will be on the campus of the hospital but not directly connected to the hospital. The question has arisen as to whether or not an obstetrician doing cases in the Ambulatory Surgery Center is actually "in-house"?

We would like your opinion, and were wondering if you would present our concerns in the SOAP BOX?

Thank you very much.

Ellen Steinberg, MD and Tracie Saunders, MD

(631)444-2975

Editor's note: This is a dilemma that seems to be arising at more and more hospitals. We welcome responses from SOAP members as to how they deal with this issue.
New Members

Aseno, Samuel, MD, Moshi, Tanzania
Aspinall, Rebecca, MD, Cotham, Bristol, United Kingdom
Baker, Keith H., MD, PhD, Boston, MA
Barry, Frances J., MD, Westmount, PQ, Canada
Brasfield, Barry W., MD, Nashville, TN
Clark, Laura, MD, Louisville, KY
Comunale, Mark E, MD, Boston, MA
Dehring, Deborah J., MD, Iowa City, IA
Edwards, Terry L., MD, Pittsburgh, PA
Glas, Kathryn E., MD, Atlanta, GA
Glass, Peter S., MB, ChB, Stony Brook, NY
Gurman, Gabriel M., MD, Beer-Sheva, Israel
Haas, Judith C., MD, Cleveland, OH
Hamilton, Kathryn R., MD, San Antonio, TX
Hebbar, Latha, MD, FRCA, FFARCS, Mt. Pleasant, SC
Heine, Michael F., MD, Louisville, KY
Jones, Stephanie B., MD, Dallas, TX
Keegan, Mark T., MD, Rochester, MN
Kilaru, Prasad R., MD, Springfield, MA
Lesser, Jonathan B., MD, Upper Montclair, NJ
Manecke, Gerard R., MD, San Diego, CA
Marsh, H. Michael, MB, BS, Detroit, MI
Maysick, Laurie K., DO, Stamford, CT
McIver, William R., MD, Pittsburgh, PA
Miller, Anthony C., MD, Chesapeake, VA
Miller, Paul K., MD, Denver, CO
Musick, David W., PhD, Lexington, KY
Naik, Viren, MD, Toronto, ON, Canada
Ng, Jacobus K.F., MD, Hong Kong, China
Nuevo, Florian R., MD, Quezon City, Philippines
Pittman, Janet E., MD, Belle Harbor, NY
Scher, Corey S., MD, Atlanta, GA
Snider, Sandra J., MD, Omaha, NE
Suelto, Melody D., MD, Mt Pleasant, SC
Tebich, Susan, MD, Tucson, AZ
Urwyler, Albert, MD, Basel, Switzerland
Van Norman, Charles C., MD, Milwaukee, WI
Wiesel, Saul, MD, Albuquerque, NM
Zura, Andrew, MD, Broadview Hts, OH
Accepted Abstracts

Oral Presentations

Gertie Marx Symposium
Thursday, June 1, 2000
8:15am - 9:45am

8:15am - 8:30am  Y-27632, A Rho-Kinase Inhibitor, Inhibits Oxytocin-Stimulated Actin Reorganization in Human Myometrial Cells
W Gogarten, MD; CW Emala, MD; CA Hirshman, MD

8:30am - 8:45am  Use of Umbilical Flow Velocimetry in the Assessment of the Pathogenesis of Fetal Bradycardia Following Combined Spinal Epidural Analgesia in Parturients
DA O'Gorman, MD FFARCSI; DJ Birnbach, MD; KM Kuczkowski, MD; DJ Stein, MD; D Kassapidis, DO; AC Santos, MD MPH

8:45am - 9:00am  Effect of Posture Prior to Spinal Anesthesia for Cesarean Section on Maternal Angiotensin II, Aldosterone, and Blood Pressure
A Miller, MD; A Levin, MD; S Datta, MD; L Tsen, MD; S Segal, MD

9:00am - 9:15am  The Minimum Local Analgesic Dose (MLAD) of Intrathecal Bupivacaine in Labor and the Effect of Intrathecal Fentanyl GM Stocks, FRCA; SP Hallworth, FRCA; R Fernando, FRCA; AJ England, FRCA; MO Columbus, FRCA; G Lyons, FRCA

9:15am - 9:30am  A Neonatal Outcome with Ephedrine Infusions with or without Preloading During Spinal Anesthesia for Cesarean Section
D Morgan, MD; J Philip, MD; S Sharma, MD; V Gottumukkala, MD; B Perez, MD; J Wiley, RN

9:30am - 9:45am  Association of the Arg16Gly Polymorphism of the β2 Adrenergic Receptor with Preterm Labor
R Landau, MD; AJJ Wood, MD; V Dishy, MD; HG Xie, MD; C Emala, MD; RM Smiley, MD, PhD

Oral Presentation
Thursday, June 1, 2000
11:00am - 12:00n
11:00am - 11:15am  
Is Fluid Preloading Necessary Before Low Dose Epidural Analgesia in Labor?  
M Kubli, FRCA; AH Shennan, MD; P Seed, MA; G O'Sullivan, MD

11:15am - 11:30am  
Atrial Natriuretic Peptide (ANP) and Hydration Prior to Spinal Anesthesia (SA) for Cesarean Section (CS)  
MA Froelich, MD, DEAA

11:30am - 11:45am  
Evaluation of Isotonic 'Sports Drinks' in Labor  
M Kubli, FRCA; MJ Scrutton, FRCA; G O'Sullivan, MD; P Seed, MA

11:45am - 12:00n  
The Effect of Position on Haemodynamic Stability During Spinal Anesthesia  
A Pickford, V Tucker, N Barnes, S Pilkin, J Eldridge

Friday, June 2, 2000
7:45am - 8:45am

7:45am - 8:00am  
Intracellular Receptors for cGMP and cAMP in Human Placenta  
SH Francis, PhD; R Ramasubramanian, MD; RF Johnson, BS; JD Downing, MD; JD Corbin, PhD

8:00am - 8:15am  
A Polymorphism of the Endothelial Nitric Oxide Synthase Gene is Associated with Pre-eclampsia  
R Landau, MD; AJJ Wood, MD; V Dishy, MD; HG Xie, MD; RM Smiley, MD, PhD

8:15am - 8:30am  
Association of the Glu298Asp Polymorphism of the Endothelial Nitric Oxide Synthase Gene with Preterm Labor  
R Landau, MD; AJJ Wood, MD; V Dishy, MD; HG Xie, MD; C Emala, MD; RM Smiley, MD, PhD

8:30am - 8:45am  
Expression of Ray Myometrial Adenylyl Cyclase mRNA at the End of Gestation  
KS Lindeman, MD

Friday, June 2, 2000
11:15am - 12:00n

11:15am - 11:30am  
Blood Ionized Magnesium Concentration in Preterm Fetal Sheep Increases During Umbilical Cord Occlusion  
JD Reynolds, PhD; S Punnahitananda, MD; Y Wang, MD; M Hopkins; F Dexter, PhD, MD; DH Penning, MD
11:30am - 11:45am
**The Effect of MgSO₄ on Bupivacaine-Induced Convulsions in Awake Rats**
T Okutomi, MD; Y Zhang, MD; TB Cooper, MA; HO Morishima, MD

11:45am - 12:00n
**Decreased Vascular Response to Phenylephrine in Pregnancy**
R Landau, MD; AJJ Wood, MD; V Dishy, MD; M Stein, MD; RM Smiley, MD

Friday, June 2, 2000
2:15pm - 3:00pm

2:15pm - 2:30pm
**Low-Dose Epidural and Spinal Analgesia Decreases Parturient Metabolic Demand**
DJ Forrester, MD; CJ Fox MD; DC Mayer, MD; FJ Spielman MD

2:30pm - 2:45pm
**Obstetric Anesthesiology Workload in a Major Academic Center: A Basis for Cost-Effectiveness Analysis**
MI Vidovich, MD; CA Wong, MD; TC Krejcie, MD

2:45pm - 3:00pm
**Is Routine Pre-operative Hemoglobin and Group & Screen Testing Necessary Prior to Elective C-Section at Term?**
UM Tharmaratnam, MBBS; JA Littleford, MD; NJ Brockhurst, MSc; S Butt, MD

Saturday June 3, 2000
9:00am - 10:15am

9:00am - 9:15am
**The Comparative Obstetric Mobile Epidural Trial (C.O.M.E.T.) Ambulatory Epidural Analgesia, Delivery Mode and Pain Relief: A Randomised Controlled Trial**
The C.O.M.E.T. Study Group, UK

9:15am - 9:30am
**A Randomized Trial of Patient-Controlled Epidural Versus Patient-Controlled Intravenous Analgesia During Labor**
SK Sharma, MD, FRCA; KJ Leveno, MD; G Messick, CRNA; JM Alexander, MD; JE Sidawi, MD; J Wiley, RN

9:30am - 9:45am
**A Multi Center Study of the Effects of Analgesia on the Progress of Labor**
H Muir, MD; T Breen, MD; D Campbell, MD; S Halpern, MD; R Liston, MD; W Blanchard, MSc
9:45am - 10:00am 0.075% Epidural Ropivacaine and Bupivacaine are Clinically Indistinguishable for Labor Analgesia
T Smith, MD; JA Thomas, MD; Owen, MD; LC Harris, RN; RD D'Angelo, MD

10:00am - 10:15am Efficacy of Nalmefene for the Treatment of Intrathecal Opioid Induced Pruritus
NN Naughton, MD; LS Polley, MD; MO Columb, FRCA; DM Dorantes, MD; DS Wagner, PharmD

Saturday, June 3, 2000
1:45pm - 2:30pm

1:45pm - 2:00pm Does a Test Dose Increase the Likelihood of Identifying Intrathecal Placement of Epidural Catheters During Labor Analgesia?
KM Kuczkowski, MD; DJ Birnbach, MD; DA O'Gorman, MD, FFARCSI; DJ Stein, MD; AC Santos, MD, MPH

2:00pm - 2:15pm Potency and Sterility of Anesthetic Drugs in an Obstetrical Setting
DS Wagner, PharmD; NN Naughton, MD; CL Pierson, PhD; T Michel, MD; M Sikorsky, MD

2:15pm - 2:30pm Local Anesthetics Given Epidurally Can Inhibit Growth of Staphylococcus Aureus at Clinically Significant Concentrations
EJ Goodman, MD; MR Jacobs, MD; S Bajaksouzian, MS; AR Windau, MT

Research Works in Progress
Saturday, June 3, 2000
4:00pm - 5:30pm

4:00pm - 4:15pm Epidural Analgesia with Ropivacaine and Bupivacaine: A Pilot Study Comparing Bolus Dose and Infusion Techniques Using Movement Analyses
TW Breen, T Yang, B Loitz-Ramage, J Ronsky, A Gildenhuys

4:15pm - 4:30pm Cusum Analysis to Evaluate Anesthesia Resident Competency at Insertion of Labor Epidurals
V Naik, MD; I Devito, MD; SH Halpern, MD
4:30pm - 4:45pm  Oral Dextromethorphan and Intrathecal Morphine for Analgesia after Cesarean Section
DMA Choi, FRCA; AP Kliffer, MD; MJ Douglas, MD

4:45pm - 5:00pm  Epidural Analgesia and Cesarean Section: Two Meta-Analyses Adjusting for Utilization of Labor Analgesia
SG Baker, ScD; KS Lindeman, MD

5:00pm - 5:15pm  A Dose Response of Intrathecal Epinephrine Combined with Bupivacaine and Sufentanil for Labor Analgesia
M Poss, MD; R D'Angelo, MD; L Harris, RN

5:15pm - 5:30pm  Vascular Response to Isoproterenol in Pregnancy
R Landau, MD; AJJ Wood, MD; V Dishy, MD; CM Stein, MD; RM Smiley, MD, PhD

Zuspan Award/Best Paper of the Meeting Award
Sunday, June 4, 2000
8:30am - 9:45am
10:15am - 11:00am

8:30am - 8:45am  Does Oral Azithromycin Have a Role in Prophylaxis for Regional Anesthesia?
M. Vaules, MD; PS Ramsey, MD; GMS Vasdev, MD; KD Ramin, MD

8:45am - 9:00am  Is a Trial of Labor in a Patient Who Has Had a Previous Cesarean Delivery Cost-effective?
A Chung, MD; A Macario, MD; Y El-Sayed, MD; ET Riley, MD; B Duncan, MD; D Sheinberg, BS

9:00am - 9:15am  Gastric Emptying in Term Parturients: Is NPO after Midnight Necessary?
M Loffredi, MD; CA Wong, MD; JN Ganchiff, RN; J Zhao, BS; Z Wang, MD; M Avram, PhD

9:15am - 9:30am  Video Analysis as a Tool for Learning Epidural Skills
DJ Birnbach, MD; WE Meadows, MD; RA Bourlier, MD; DJ Stein, MD; AC Santos, MD, MPH; MM Kuroda, MPH; DM Thys, MD

9:30am - 9:45am  Neural Substrates of Labour Pain: Uterine Distension in the Rat During Oestrus Elevates Nitric Oxide in Neurons of the Nucleus of the Solitary Tract
ME Ward, MD; MJ Cousins, MD; KA Keay, PhD

10:15am - 10:30am  Effect of Oral Naproxen on Pain Following Cesarean Section
MSLB Goheen, MD; BY Ong, MD; RF Wahba, MD; SJ Lucy, MD
10:30am - 10:45am  
**Efficacy and Cost-effectiveness of Prophylactic Ondansetron versus Metoclopramide for Cesarean Section Patients under Epidural Anesthesia**
PH Pan, MD; C Moore, PhD; R Fragneto, MD; V Ross, MD; G Justis, MD

10:45am - 11:00am  
**Association of a Polymorphism of the Beta-2 Adrenergic Receptor with Pre-eclampsia**
R Landau, MD; AJJ Wood, MD; V Dishy, MD; HG Xie, MD; RM Smiley, MD, PhD
Accepted Abstracts
Poster Presentations

1. A Comparison of Intrathecal Fentanyl and Sufentanil for Labor Analgesia
   KE Nelson, MD; RD D'Angelo, MD; T Rauch, MD; V Terebuh, MD

2. Cost Efficiency of PCEA Versus Single Dose Intrathecal Morphine for Analgesia After Cesarean Section.
   K Vereecken, MD; M Vercauteren, MD, PhD; H Coppejans, MD

   MC Norris, MD; ST Fogel, MD; C Conway-Long, RN

4. Herbal Medicine Used in Obstetric Patients
   DL Hepner, LC Tseng, S Segal, WR Camann, S Datta, AM Bader

5. The Effect of Posture and Baricity on the Spread of Intrathecal Bupivacaine for Elective Cesarean Section
   SP Hallworth, FRCA; R Fernando, FRCA; GM Stocks, FRCA

6. Tertiary Cesarean Section Do Not Take Longer than Primary Sections
   SR Goodman, MD; AM Drachenberg, MD; RM Smiley, MD, PhD

7. Determination of Dose Response for Intrathecal Ropivacaine in Laboring Parturients
   A Wali, MD, FFARCS; M Suresh, MD; G Mena, MD; R Jahangir, MD; S Imiak, MD; R Vadhera, MD; Q Palacios, MD; U Munnur, MD; S Longmire, MD

8. Inadequate Thromboprophylaxis for Cesarean Sections: Which Parturients are at Higher Risk?
   S Rutter, R Orme, J Burry, C Grange, R Russell

9. Intrapartum Analgesia for Severe Preeclamptics
   GH Shih, MD; RD Vincent, MD; DH Chestnut, MD; B Hogg, MD; J Owen, MD; JC Hauth, MD

10. Interventions During Epidural and Combined Spinal Epidural Labor Analgesia
    BD Macaulay, MD; MD Barton, DO; MC Norris, MD

11. Thromboelastography in Parturients Receiving Magnesium
    MDP Harnett, FFARCSI; K Bhavani-Shanakar, MD; S Datta, MD

12. A Prospective Randomized Controlled Trial of Oral Intake of Liquids During the First Stage of Labor
    SA Laifer, MD; DS Siddiqui, MD; TP Do, MD; JE Collins, CMN, MSN; RJ Stiller, MD; SL Moffat, RNC; NJ DeGennaro, DNM, MPH; DS Buonafede, MD

13. Obstetric Anesthesia in Turkey
    MD Owen, MD; S Sahin, MD

14. Audit of the Anesthetic Implications of Induction of Labor
    J Harrad, FRCA; C Taylor, FRCA; M Ward, MBBS; P Howell, FRCA

15. Ropivacaine and Fentanyl for Intrathecal Labor Analgesia
    CM Palmer, MD; W Nogami, MD; D Alves, RN

16. Oral Clonidine: Use with Intrathecal Morphine for Post-cesarean Analgesia
17. **Critical Illness in Pregnancy in an Inner City Hospital**  
CM Palmer, MD; W Nogami, MD; D Alves, RN

18. **Introduction of an Ultra-Low Dose Labor Epidural Solution: Impact on Obstetric Outcome**  
SJ Reid, MB, BS; C Wong, MD; D Mayes, Msc

19. **Combined Spinal Epidural vs. Epidural Analgesia: Part 2: Obstetric Outcome**  
MC Norris, MD; ST Fogel, MD; C Conway-Long, RN

20. **PCEA Comparison of Ropivacaine versus Bupivacaine 0.0625%: No Difference**  
SH Kim-Lo, MD; M Jackson, MD; S Goodman, MD; R Landau, MD; C Ciliberto, MD; RM Smiley, MD, PhD

21. **Post-Epidural Back Pain in the Parturient - A Comparison of the Epidural Sprotte vs Tuohy Needle**  
PJ Angle, MD; SH Halpern, MD; P Morley-Forster, MD; JA Littleford, MD; K Gnanendran, MD; H Owen, RN; N Nrockhurst, Msc

22. **Patient-Controlled Intravenous Analgesia (PCIA) Using Remifentanil (R) for Labor Analgesia**  
F Roelants, MD; E DeFranceschi, MD; P Lavan'homme, MD

23. **Is Frequent Redosing of Labor Analgesia Epidural Catheters Associated with Cesarean Delivery?**  
BM Scavone, MD; R Greenbaum, MD; CA Wong, MD

24. **Is 0.1% Ropivacaine Equipotent to 0.06% Bupivacaine?: A Double-Blinded, Randomized Study**  
G Mandell, MD; S Makishima, MD; S Ramanathan, MD

25. **Laparoscopic Surgery in Pregnancy - Is Invasive Monitoring Essential?**  
K Bhavani-Shankar, MD; RA Steinbrook, MD; DC Brooks, MD; S Datta, FFARCS

26. **Comparison of Epidural Fentanyl versus Epidural Sufentanil for Early Labor Ambulatory Epidurals**  
T Lucas, MD; RK Parker, DO; NR Connelly, MD; V Valluruupalli, MD; S Bhopatkar, MD; S Dunn, MD

27. **The Obstetric Anesthesia Clinic: Applying Technology to Facilitate QA**  
NJ Brockhurst, Msc; JA Littleford, MD; SE Georgoussis, Msc(c)

28. **An Accurate Blood Pressure Device Perms Poorly in Pre-Eclampsia**  
AH Shennan, MD, CR Jones, Bsc; F Pakarian, MD; RH Poet; L Poston, PhD; G O'Sullivan, MD

29. **Conus Damage By "Atraumatic" Spinal Needles**  
F Reynolds, MD

30. **Hypotension and Postural Haemodynamic Changes Following Cesarean Section. Effects of Glycopyrrolate 0.4 mg iv With Spinal Anesthesia**  
CC Rout; DA Rock

31. **Inadvertent Dural Punture and the Efficacy of Prophylactic Blood Patches at a University Hospital**
32. Labor Outcome with Ropivacaine and Bupivacaine Used for Epidural Analgesia
   H Finegold, MD; S Ramanathan, MD
33. The Dose/Response of Intrathecal Fentanyl Added to Bupivacaine for Labor Analgesia
   CA Wong, MD; BM Scavone, MD; JN Ganchiff, RN; TP Stauss-Hoder, RN
34. Histopathology Proven Chorioamnionitis and Neonatal Outcome
   MC Vallejo, MD; B Kaul, MD; S Ramanathan, MD
35. Obstetric Patients Requiring Admission to an Intensive Therapy Unit
   DN Guerin, FFARCSI; JH Coakley, FRCP
36. Does IT Fentanyl Affect IT Morphine Analgesia after Cesarean Delivery?
   SHR Lee, MD; NL Herman, MD; BL Leighton, MD; J Fong, MD; F Gadalla, MD
37. Comparison of Epidural Catheter Activation in Women Undergoing Primary and Repeat Cesarean Section under Combined Spinal Epidural Anesthesia
   KM Kuczkowski, MD; DJ Birnbach, MD; DA O'Gorman, MD, FRARCSI; DJ Stein, MD;
   AC Santos, MD, MPH
38. Naproxen and Epidural Morphine for Perineal Pain after Forceps Delivery
   DMA Choi, FRCA; EA Peter, MD; MJ Douglas, MD; P Janssen, MPH
39. Perinatal Outcome of Pregnant Women Receiving High Dose Low-Molecular Weight Heparin
   SA Laifer, MD; RJ Stiller, MD; G Dunston-Boone, MD; JCG Whetham, MD
40. Is Oxytocin Stimulated Labor More Painful than Spontaneous Labor?
   JM Alexander, MD; SK Sharma, MD; DD McIntire, PhD; J Wiley, RN; KJ Leveno, MD
41. Does the PCEA Technique Reduce the Number of Physician-Administered "Top-ups" Required to Maintain Analgesia During Labor?
   JR Schultz, MD; E Bell, MD; H Muir, MD; Y Olufolabi, MD
42. Prehydration and Combined Spinal Epidural Labor Analgesia
   BD Macaulay, MD; MD Barton, DO; MC Norris, MD; L Bottros, MD
43. Patterns of Nerve Block by Different Combination of Lidocaine-Bupivacaine Mixture
   H Ko, MD; Y Choi, MD
44. Cerebral Oxygenation During Cesarean Section
   O Amosu, MD; K Bhavani-Shankar, MD
45. Comparison of Cisatracurium-Induced Neuromuscular Blockade Between Non-pregnant (NP) and Immediate Postpartum (PP) Patients
   PH Pan, MD, MSEE; C Moore, PhD
46. Can Epidural Saline Promote Recovery From Spinal Anesthesia?
   P Nelson, LC Tsen, AM Bader BV Khodali, S Datta, S Segal
47. "Labor Epidural" and the World-Wide-Web: Surfing or Sinking?
   KA Weesner, MD; LA Sutherland, MD; AS Madamangalam, MD; PE Hess, MD; SD Pratt, MD;
   AK Soni, MD; MC Sarna
49. Are Lower Concentrations of Ropivacaine Effective for Labor Analgesia?
CM Palmer, MD; W Nogami, MD; D Alves, RN

50. Spinal Analgesia for Cesarean Section: A Comparison of the Effects of Right Lateral and Supine-Wedged Position on Blood Pressure
H Hartley, H Ashworth, M Kubli, G O'Sullivan, P Seed, F Reynolds

51. Increased Risk of Obstetric Anesthesia Complications in Medical Professionals and their Spouses
DW Martin, MD; R Landau, MD; S Goodman, MD; SH Kim-Lo, MD; CF Ciliberto, MD; RM Smiley, MD, PhD

52. Factors Associated with Postpartum Uterine Pain
KA Weesner, MD; LA Sutherland, MD; AS Madamangalam, MD; AK Soni, MD; PE Hess, MD; MC Sarna, MD; SD Pratt, MD

53. Epidural Bolus Requirement is a Measure of Maternal Labor Pain Severity
PE Hess, MD; SD Pratt, MD; TP Lucas, MD; AK Soni, MD; T Corbett, BA; NE Oriol, MD; MC Sarna, MD

54. Micro-dose Intrathecal Morphine and Rectal Diclofenac for Postcaesarean Analgesia
WK Lo, Mmed; JL Chong, Mmed; S Rajammal, SSN

55. Effects of Systemic Ketorolac on Intrathecal Morphine InducedScratching and Antinociception in Monkeys
NN Naughton, MD; MC Ko, PhD

56. Progesterone Increases Cellular Growth in Human NT2 Cells
EM Lockhart, MD; R-M Boustany, MD; DH Penning, MD

57. Calculation of Segmental Dose Requirement of Epidural Lidocaine from Anthropometric Variables
MH Rao, MD; P Thota, MD; A Mohan, MD

58. Epidural Ropivacaine 0.50% vs. 0.75% for Cesarean Delivery
E Pelliccia, A Trabucchi

59. Multiport Epidural Catheter Test Doses
BL Leighton, MD

60. The Impact of Carticosteroid Administration on the Rate of Regional Anesthesia in Patients with Hemolysis, Elevated Liver Enzymes and Low Platelet Count (HELLP Syndrome)
JM O'Brien, MD; JR Barton, MD; SA Shumate, DO; SL Satchwell, RN; DA Milligan, MD

61. Combined Spinal-Epidural Anesthesia (CSE) Using Reduced Doses of Intrathecal Bupivacaine in Women with Severe Preeclampsia; Safety & Efficacy
J Ramanathan, MD; A Vaddadi, MD

62. Obstetric Anesthesia, Parturients and the Internet - A Characterization of Use
KA Weesner, MD; LA Sutherland, MD; AS Madamangalam, MD; AK Soni, MD; PE Hess, MD; SD Pratt, MD; MC Sarna, MD

63. Nalbuphine Given IV Before Epidural Analgesia for Labor Causes More Frequent Redosing of Epidural Medications
EJ Goodman, MD; BB Gold; AE Meyers, MD

64. **Recovery Room Admission Temperature after Cesarean Delivery: Spinal vs. Epidural Anesthesia**
   S Sherwani, MD; CA Wong, MD; RJ Marcus, MD

65. **Anesthesia for the Obstetric Patient with Multiple Sclerosis**
   LC Tsen, W Weems, S Datta, AM Bader

66. **Sodium Nitroprusside (SNP) Obtunds the Vasopressor Action of 5-Hydroxytrptamine (5-HT) on the Placental Intravillous Circulation**
   JW Downing, MD; BH Minzter, MD; R Ramasubramanian, MD; RL Paschall, MD; J York, MD; RF Johnson, BS

67. **Response of the Fetoplacental Vasculature to Graded Hypoxia: A Study Using the Isolated, Dual Perfused, Single Human Placental Cotyledon.**
   RF Johnson, BS; R Ramasubramainian, MD; BH Minzter, MD; RL Paschall, MD; J York, MD; JW Downing, MD

68. **Is the Neurologic and Adaptive Capacity Score (NACS) a Reliable Method of Newborn Evaluation?**
   PJ Young, BM, FRCA; SH Halpern, MD; J Littleford, MD; N Brockhurst, MSc
Calendar of Meetings

2001


March 8-11, Obstetrical Anesthesia 2001: The Sol Shnier, MD Obstetrical Anesthesia Meeting, Grand Hyatt Hotel, Union Square, San Francisco, CA. Info: Judy L. Johnson, Department of Anesthesiology, University of California, San Francisco, Box 0648, Room C-450, San Francisco, CA 94143-0648; Ph: (415) 476-2922; Fax: (415) 476-2273; Email: judy_johnson@quickmail.ucsf.edu.

March 16-20, 75th Clinical and Scientific Congress of the International Anesthesia Research Society, Ft. Lauderdale, FL. Info: IARS, 2 Summit Park Drive, Ste. 140, Cleveland, OH 44131-2553; Ph: (216) 642-1124; Fax: (216) 642-1127.


March 24-27, International Obstetric Anaesthesia and Analgesia Meeting, International Convention Centre, Durban, South Africa. Info: EventMed, Department of Anaesthesia, Private Bag 7, Congella 4013, Durban, South Africa; Ph/Fax: 0027 31 2604472; Email: maliti@med.und.ac.za.

April 25-28, SOAP 33rd Annual Meeting, Hyatt Regency, San Diego, CA. Info: contact SOAP

April 29-May 2, ASA Legislative Conference, J.W. Marriott, Washington, D.C. Info: ASA Executive Office, 520 N. Northwest Highway, Park Ridge IL 60068-2573; Ph: (847) 825-5586; Fax: (847) 825-1692; Email: mail@ASAhq.org.

October 13-17, ASA Annual Meeting, New Orleans, LA. Info: ASA Executive Office, 520 N. Northwest Highway, Park Ridge IL 60068-2573; Ph: (847) 825-5586; Fax: (847) 825-1692; Email: mail@ASAhq.org.
2002

April 28-May 1, ASA Legislative Conference, J.W. Marriott, Washington, D.C. Info: ASA Executive Office, 520 N. Northwest Highway, Park Ridge IL 60068-2573; Ph: (847) 825-5586; Fax: (847) 825-1692; Email: mail@ASAhq.org.

May 1-5, SOAP 34th Annual Meeting, Hyatt Regency, Hilton Head, SC. Info: contact SOAP

October 12-16, ASA Annual Meeting, Orlando, FL. Info: ASA Executive Office, 520 N. Northwest Highway, Park Ridge IL 60068-2573; Ph: (847) 825-5586; Fax: (847) 825-1692; Email: mail@ASAhq.org.

2003

May 14-17, SOAP 35th Annual Meeting, Pointe Hilton Resort at Squaw Peak, Phoenix, AZ. Info: contact SOAP

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The Society for Obstetric Anesthesia & Perinatology thanks all representatives of industry for their support of the 2001 Annual Meeting.

Exhibitors to Date

Augustine Medical Inc.

International Medical Devices

Purdue

SIMS Portex, Inc.

Harcourt Canada

Spacelabs Medical