THE EDITOR **OPINES**

I suppose spring has sprung where most of you are. We are stuck in misery here in the upper Midwest. For all we know the sun died several months ago. My golf clubs are rotting in the garage along with our lawn furniture. I live here because I love the change of seasons; when the devil is this season going to change?!

Well, at least there's some good news. We have hyaluronidase back in manufactured form instead of from a compounding pharmacy. Just in case you didn't know, two companies have put it out on the market: Amphastar Pharmaceuticals (Amphadase®) and ISTA Pharmaceuticals (Vitrase®). Our pharmacy supplied me with Amphadase, as it was released first, and it has been great so far. Nonetheless, let us all be on our toes and remember that strange things can happen. If anyone has any problems with one of these drugs, please let us know immediately. Keep a keen eye out for things like orbital edema, allergic reactions of all kinds, muscle problems, fevers, etc. Our organization may well use more of these products than any other single group, so it would be likely that we would be the ones to discover untoward reactions.

Steve Gayer and Rick Rivers have planned a super meeting for this fall. They have lined up many excellent speakers and very interesting topics. We'll be at a different venue, one this meeting has not been to in the past: the Marriott Hotel, located right on Michigan Avenue, a couple of blocks north of the Chicago River. It is handy to shopping and dining, and it has undergone extensive remodeling within recent years. The dates are September 23 – 25, 2005, a little earlier than usual. The weather will be terrific, as always, so we expect a record turnout.

I have often asked you to write letters to me if you want to make comments about what you read in *OASIS*. I enjoy warm fuzzies as well as criticism. I haven't had much of either from you, so I often wonder if anyone is reading this stuff. Well, I had the ultimate warm fuzzy after the fall issue. I received an e-mail with comments from Dr. Bhanu in India, which I have printed in this issue. It was a wonderful surprise to receive a letter from someone half way around the world who had read our newsletter. We wrote a couple of e-mails to each other after the original, and I hope that we will be able to continue the correspondence. It is a credit to our organization that we can reach all the way around the world to exchange experiences with others who practice ophthalmic anesthesia. After being bombarded so frequently with pessimistic global news, it is refreshing to be reminded that the world is filled with many wonderful people who are dedicated to helping their fellow human beings. Dr. Bhanu really made my day.

Gary Fanning, MD

President's Message

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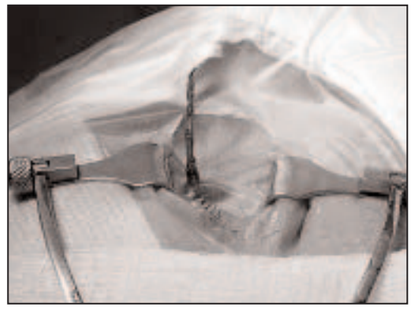

an intraocular lens and repair, he would have excellent vision. Fully cognizant of the fact that this person was in the midst of what was perhaps the most miserable day of his life, we all nonetheless kept remarking amongst ourselves how truly blessed and lucky he was.

And with that, my friends and colleagues, I have come upon this President's Message take-home lesson: Despite the dread and discomfort of an interminable airport delay combined with the likelihood of not being present on time to give my lecture, I am truly blessed and lucky: Free and unencumbered by other obligations as I sit here for hours on end, I have finally written this article! •

OASIS

OPHTHALMIC ANESTHESIA SOCIETY IN-SIGHT • SPRING 2005 NEWSLETTER

OAS 19th Annual Meeting: Putting It Bluntly, A True Quest for Glory!

Steve Gayer, MD

The curriculum for the 19th Annual Scientific Meeting of the Ophthalmic Anesthesia Society is firmly set. This is the second OAS national meeting that I have had the pleasure of arranging. The task was not as daunting as I first imagined it would be due to assistance from the membership in the form of recommendations for particular speakers and volunteers to talk. In fact, we already have three lecturers tentatively scheduled for the 20th Annual Meeting in 2006!

The subtitle for this article is derived from the titles of two lectures to be given by invited speakers from the United Kingdom. Dr. Chris Dodds, an innovator in the use of ultrashort, very blunt catheters, will present "Sub-Tenon's Anesthesia: Putting It Bluntly." Professor Dodds has authored and edited numerous publications and texts on the matter. He co-chairs (along with Professor Chandra Kumar) a well-attended annual video-conference on ophthalmic anesthesia in Middlesbrough, England, and is a key member of our sister organization, the British Ophthalmic Anaesthesia Society.

Dr. Hamish McLure, our second guest of honor from the U.K., will discuss "Hyaluronidase: A Quest for Glory!" If you are vacillating between a trip to New York City to see "Monty Python's Spamalot" on Broadway or attending this year's OAS meeting, the choice is clear: OAS 2005!

Dr. Greg Koski, appointed by former Health & Human Services Secretary and current University of Miami President, Donna Shalala, as the first Director of the Office of Human Research Protections, will review recent clinical research events that prompted the federal government to promulgate regulations regarding ethical means of conducting such research. He is an extraordinary speaker whose details of specific incidents of wayward approaches to clinical ophthalmic surgery research that have occurred in past years will shock, entertain, and educate our membership.

This year's scientific agenda also features two oculoplastic surgeons: Professor David Tse will discuss the pathophysiology, diagnosis, and treatment of idiopathic intracranial hypertension. Controversies exist as to both surgical and anesthesia management of so-called pseudotumor cerebri. Dr. Shannath Merbs

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19th Annual OAS Meeting: A True Quest for Glory!

Continued from page one

will detail the use of indwelling catheters to manage pain after outpatient enucleation.

Dr. Mark Rozner, well recognized as a leading authority on perioperative issues associated with the use of pacemakers and implanted defibrillators, will explain how the 2004 ASA Practice Advisory for care of patients with intrathoracic gadgets applies specifically to the ophthalmic surgery patient. Dr. Jeffery Katz will update us on the controversies regarding the cardiovascular implications of perioperative use of NSAIDS and COX-2 Inhibitors.

Dr. David Ferson will present the alternatives and review the design differences in the assortment of supraglottic airways available to use on ophthalmic surgery patients undergoing general anesthesia. The open-globe, full-stomach scenario is one of our organization's favorite controversial issues. Dr. Elie Chidiac will delineate a specific algorithm for use of succinylcholine in patients with traumatic eye injuries. The Q&A session following these two lectures promises to be lively!

Another area of contention is the presence of parents in the operating room upon induction of general anesthesia of children. Dr. Michael Vigoda will tackle this issue as well as other perioperative concerns of anesthetizing neonates, infants, and children for eye surgery.

Without an iota of controversy, Dr. Richard Rivers is the OAS's chief "pure" scientist. For his presentation, he will describe his research into the effects of anesthesia on blood flow to the orbit and eye.

Two of our finest long-standing CRNA members will present topics as well. Randolf Harvey will describe his parallel approach to needle-based orbital anesthesia, while Don Hirschman will expound upon the common pitfalls associated with billing for our services.

In addition, we will host another episode of Ophthalmic Anesthesia Jeopardy, provide three clinical workshops, and end with a series of case discussions. Drs. Fanning, Feldman, Rivers, and many others will play key roles in these presentations.

In summary, the 19th Annual Scientific Meeting of the Ophthalmic Anesthesia Society will feature national and international speakers of prominence: scientists as well as academic clinicians, ophthalmologists, CRNAs, and anesthesiologists. Another great meeting is on the horizon! •

President's Message

Steve Gayer, MD, MBA

Steve Gayer, MD, MBA

I must confess. I am a master procrastinator. Gary Fanning, *OASIS*'s Editor-In-Chief and OAS Guiding Influence, has prodded me via email a few times to submit this issue's President's Message. Repeatedly, my taskmaster Treo has reminded me of the obligation. Nonetheless, the hectic schedule of clinical, academic, and family obligations continued to push this duty into the "pending" pile of things to do.

I am currently *en route* to speak at the "New Horizons in Ophthalmology" Conference in Aspen, Colorado. My key topic, regional anesthesia for select patients with certain traumatic open-globe injuries, is one that all OAS members are familiar with, as I have spoken on the issue a few times at prior national meetings of our organization.

About an hour ago, I settled into the cramped seat of my connecting flight from Denver to Aspen. At once, the notion of launching the laptop and penning the President's Message crossed my mind. As I fumbled for the computer, another thought invaded my consciousness: "this would be a great time to take a nap!" Alas, that was not to be. As we taxied down the runway, the pilot announced that the flight was returning to the gate due to inclement weather in Aspen. I now sit in Denver International Airport's terminal building (which sounds as final as it feels) with two options: Purchase a bus ticket for a six-hour trek through a snowstorm or travel standby later in the evening after the untoward weather system passes through Aspen. Regardless of which alternative I choose, one commonality presents itself: I now have oodles of time to scribe this missive.

Ideally, rather than express the usual platitudes one commonly finds in articles of this sort, I'd prefer to discourse on unique themes that nonetheless have relevance to our membership. I could talk about the anesthesia and surgical management of Patrick Lawler's recent operation. He is the unfortunate fellow who presented to the dentist's office complaining about a persistent toothache and blurry vision. Upon examination, the dentist discovered that Mr. Lawler had a four-inch nail embedded in his skull! X-ray revealed that it extended from the palate through the orbit and into the cranial vault. Apparently, this construction worker from the ski-resort town of Breckenridge, Colorado, failed to remember that he had had a recent nail-gun mishap!

Of course, most of the readership would conclude that I am picking on Coloradoans in general due to my current airline predicament at Denver International Airport.

Instead, I might discuss more spiritual matters. How about the case of the Thai monk, Phra Kru Prapatworakhun, who, in his quest to seek relief from ocular pruritis, mistook a tube of Super Glue for comfort drops and inadvertently glued his eyelids shut! In an attempt to help, a fellow monk poured various solvents onto Mr. Prapatworakhun's eyelids, which only served to exacerbate the problem, causing intense, searing pain. One week later, vision was restored via a good anesthetic combined with quality ophthalmic care (and a little acetone).

Due to recently enacted airport security protocols, I do not have any box-cutters, fingernail clippers, or scissors with me. I wonder if the airport gift shop sells Super Glue?

Alternatively, I may choose to discuss the case of the patient we anesthetized a few Sundays ago. This gentleman, a twenty-three-year-old immigrant from Nicaragua, agreed to help a friend garden a piece of property that abutted a secure area lined by a barbed-wire fence. While weed-whacking along the perimeter, he accidentally propelled a small projectile of barbed wire directly into his eye (See photo on page 16). The material wedged itself through his pupil and lens, and, amazingly, completely missed other structures such as his iris or retina. After lensectomy, placement of

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Scientific Advisory Board Election: Call for Nominees

The Scientific Advisory Board will have three vacancies this fall, as it does each year. There will be one opening each for an ophthalmologist, a nurse anesthetist, and an anesthesiologist.We would like to have at least two people running in each category.

We will publish the nominees in the summer issue of *OASIS*, which will also include a ballot, and the winners will be announced at the annual meeting.

If you would like to run for the Board or know of someone who should, please let us know. If you are currently serving your final year on the Board, you may certainly nominate yourself for re-election. Ultimately, we will need a brief bio and a picture of each nominee, both of which will be published in the summer issue.

Many people ask what it entails to serve on the Board. It does require a commitment to attend the three annual meetings during your tenure. During the year you will receive some communications about issues of interest and/or importance to OAS members, but we do not schedule meetings in addition to the annual meeting. The issues discussed at the Board meetings pertain to our oversight responsibilities, annual meeting details (when, where, content, etc.), revenue enhancement (we could really use some help with this one), officer elections, and the like. The time commitment is not onerous, but the service is critical.

Please consider running, or nominating someone, for the Scientific Advisory Board. To do so, contact Karen Morgan kmorgan@amainc.com, Steve Gayer at sgayer@med.miami.edu, or Gary Fanning at glfanning@aol.com. •

Under the Covers

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and, indeed, is practiced by many people, especially ophthalmologists. However, this block technique is precisely why terrible complications are reported after orbital regional anesthesia.

Three cardinal sins are described in their technique: 1) the needle used is too long (one and one-half inch). There is no reason to use a needle longer than one inch, and certainly never, ever longer than one and a quarter inch. 2) The needle is inserted too far medially. It should be inserted at the corner of the orbit, not where they suggest. 3) The needle should not be aimed apically. Aiming a long needle at the apex is courting with disaster every time. The only miracle is that disaster doesn't happen more often when this is done. The needle should be aimed to intersect a sagittal plane going through the lateral limbus when the eye is in neutral gaze. Aiming the needle in that fashion and using a one-inch needle, one will never have to worry about being in the "packed-pickle-jar" portion of the orbit: i.e., in the apical area of the orbit where the vulnerable structures are packed tightly together.

If these three cardinal sins are news to you, you haven't been listening to Bob Hustead, Roy Hamilton, and me over the years. If you take exception to my three cardinal sins, I'll meet you in my workshop in September at the OAS annual meeting, and we'll duke it out. I am willing to stand up and shout anywhere that the block technique described in this paper should be abandoned at once and forever. •

> ***I am willing to stand up and shout anywhere that the block technique described in this paper should be abandoned at once and forever.***

Flomax® and Intraoperative Floppy Iris Syndrome

Gary Fanning, MD

Recently two elderly men gave our surgeon fits during cataract surgery because of a so-called floppy iris. When this occurs, the pupil constricts and the iris tends to be atonic and prolapses into the incision, making phacoemulsification a difficult task. Both of our patients were taking the drug Flomax® (tamsulosin). The remainder of this article is a compilation of information found in the trade magazine *EyeWorld* and in a physician advisory from the American Society for Cataract and Refractive Surgery (ASCRS). An Internet Google search for "floppy iris syndrome" will yield additional information.

Tamsulosin is an alpha-1 antagonist that is specifically selective for the alpha-1A subtype receptor found in the smooth muscle of the prostate and bladder neck. Its use results in relaxation of the smooth muscle in this area, relieving the symptoms of prostatism in many patients. According to the article by Drs. David Chang and John Campbell published in *EyeWorld*, the drug is the most commonly prescribed for benign prostatic hypertrophy. Chang and Campbell performed a literature search, which suggested that the smooth muscle of the iris contacts the same receptor subtype as the prostate and bladder neck. It is possible, therefore, that use of Flomax® results in the loss of tone in the smooth muscle of the iris responsible for dilation. So far no association with floppy iris syndrome has been made with the other two drugs commonly prescribed for BPH: Hytrin® and Cardura®.

Of particular interest are two studies Dr. Chang discusses in *EyeWorld,* in which investigators looked at 1600 patients and found a 2.3% incidence of floppy iris syndrome during surgery. Of those patients who exhibited the syndrome, 95% had been taking Flomax®. Dr. Chang points out that if the patient stops taking the drug for 1 – 2 weeks prior to surgery, the likelihood of floppy iris syndrome may be reduced, but not always.

Look for the Chang and Campbell studies to be reported in an upcoming issue of the *Journal of Cataract and Refractive Surgery*. According to the ASCRS advisory, their findings will also be reported at the ASCRS meeting in April. •

Letter to the Editor

My name is Dr. Bhanulakshmi Inder Mohan, and I am the head of the Department of Anesthesiology at the Premier Eye Institute at Chennai, South India-Sankara Nethralaya. I am also a member of the OAS. While reading the Fall 2004 newsletter, I discovered that the problems you face are pretty much the same as we do! We do lots of general anesthetics as well as local. We have at least 2500 surgeries or more per month in 22 operating theaters.

Regarding the PONV problem, we manage to tackle it this way: we intubate all our patients with a long-acting muscle relaxant, most often vecuronium. We induce anesthesia with Propofol, use sevoflurane or isoflurane for maintenance, and give a small dose of fentanyl intraoperatively. We give Ondansetron and Decadron just before extubation. This seems to be working for us. We've also done a study on the use of Ondansetron and the incidence of PONV in patients undergoing scleral buckling under general anesthesia. It was published in the *Hong Kong Journal of Ophthalmology* a couple of years ago. In my experience, emesis is a very real problem in patients undergoing eye surgery, irrespective of preoperative fasting times.

Best regards,

Dr. Bhanu •

You Asked for It!

You have questions? We'll get answers. Here are some examples.

Cataract Surgery with Topical Anesthesia: IV Medications?

When using topical anesthesia for cataract surgery, do you give any IV medications? If so, what drugs and what dosages do you use? The director of our surgicenter has initiated a study to measure patients' anxiety level during the perioperative period. The study was preceded by a conversation in which I was asked if patients really need these expensive IV medications, which makes me suspect that the study is more of a cost-analysis issue than a quality-assurance issue.

Answer #1

For topical anesthesia I typically prepare the patient and then administer 1 – 1.5mg of midazolam. I have stopped giving fentanyl unless I have an indication (bad back, positioning difficulties due to pain, etc.). I like to administer at least a small amount of midazolam not only for the patient's comfort, but also to help me assess the patient's response should I have to administer sedation during the procedure.

– Dan Simonson, CRNA, Spokane, Washington

Answer #2

Of our four surgeons, one uses topical anesthesia only. For his cases, I do give IV sedation, which consists entirely of low-dose midazolam. We have an elderly population here in the Palm Springs area, with an average age of 80 years. Depending on the patient's condition, I titrate 0.5 – 1mg at a time, usually with an upper limit of no more than 2mg. I have attempted in the past to use no sedation and had much less patient satisfaction. With the caveat that perhaps with a different surgeon one could do just fine with no sedation, in my experience light sedation works very well with topical anesthesia for cataract surgery.

– Terry Gabrielson, MD, Palm Springs, California

Answer #3

We give 1 – 2mg of midazolam prior to giving the topical. This helps to keep patients relaxed and makes the time go faster for them in the preoperative area. We sometimes give an additional milligram in the operating room, but most of the time this is not necessary since the time interval from admission to surgery is usually less than an hour.

– Chuck Zueck, CRNA, Frankfort, Illinois

Answer #4

We may do about 5 cases under topical a week, and most of our topicals do not require additional IV sedation. We do sometimes use midazolam and/or fentanyl for topical patients, generally about 1 mg and 50mcg, respectively. Usually there is a special reason why they are topical in the first place. We do primarily retrobulbar blocks and sedate the majority of our patients. We use an average dose of thiopental 125mg and rarely require any additional sedation. If the patient is having arthritic pain we may give a little fentanyl.

– Peggy Woods, CRNA, Dothan, Alabama

Gloves for a Peribulbar/Retrobulbar Block? Hygiene Between Patients?

Do the anesthesia providers at your institution routinely wear gloves while doing a peribulbar/retrobulbar block? What do you use for hand hygiene between patients?

Do the anesthesia providers at your institution routinely wear gloves while doing a peribulbar/retrobulbar block? What do you use for hand hygiene between patients?

Answer#1

It is rare for someone to don gloves when placing a block for the eye. Just a swab of alcohol does it. Blocks are placed by the ophthalmologist or eye resident/fellow. Everyone used to scrub between cases, but now Avapro

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Under the Covers

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the provider. In other cases it occurs because the provider is forced to lighten anesthesia during a difficult phase of the procedure or because the patient is poorly tolerating the procedure. In some cases, it occurs even though all seems to have been quite properly done. The article's empathetic advice for dealing with a victim of this complication is excellent. It is always a good idea to question your patients after general anesthesia to ask if they had any dreams or if they felt anything during surgery.

The article's empathetic advice for dealing with a victim of this complication is excellent. It is always a good idea to question your patients after general anesthesia to ask if they had any dreams or if they felt anything during surgery.

The details of the case of the woman experiencing pain during an IOL exchange were sent to me by Dan Simonson, CRNA, who found them in the e-weekly newsletter of the Outpatient Surgery Magazine *(November 22, 2004 mailing). The patient received an orbital block, which resulted in akinesia. The patient claimed that she experienced the most excruciating pain of her life and prayed to die so that she would be spared from the pain. The surgeon, however, claimed that he could not have done the case if she had been experiencing that much pain. The jury awarded her $500,000.*

The lesson to be learned here is to listen to your patients. If they complain of pain, stop and do something about it. There are many options, including more local anesthetic (topical, intracameral, repeat block), supplemental IV opioids, or even converting to general anesthesia. It does seem a bit unusual that the surgeon could have completed the procedure if the patient was having as much pain as she insisted, but then why did the procedure take so long?

It would also be interesting to know what agent was used for the block. Ninety minutes can be a long time for lidocaine or mepivacaine, especially if the patient had to wait for 30 minutes or more after the block before going to the O.R. If anyone associated with this case would care to share more of its details, feel free to write and we'll print your remarks (anonymously, of course).

Retrobulbar block vs. sub-Tenon's block for vitreoretinal surgery

This report from the Wilmer Eye Institute at Johns Hopkins University compares the results of two groups of patients (64 eyes, total) undergoing vitreoretinal surgery who were randomized to receive either a retrobulbar (intraconal) [RBB] or sub-Tenon's (episcleral) [STB] block. The patients were then compared for intraoperative pain. Both groups required supplemental local anesthetic (more than a third of each group) and IV medication (85% for RBB and 70% for STB) for pain control. The authors concluded that STB is as effective as RBB in controlling intraoperative pain.

Reference: Lai MM, Lai JC, Lee W-H, et al. Comparison of retrobulbar and sub-Tenon's capsule injection of local anesthetic in vitreoretinal surgery. *Ophthalmology* 2005; 112: 574 – 579.

Editor's Note: This was a well-done study, and the results certainly seem to support their conclusion that vitreoretinal surgery can be done as well under sub-Tenon's anesthesia as under an orbital block. I am a bit surprised, however, that they didn't use 0.75% bupivacaine instead of a mixture of lidocaine and bupivacaine. They may have had better results in both groups.

My only severe criticism of this paper involves their description of the retrobulbar block, which occurs on page 575: "A retrobulbar injection was performed by inserting an Atkinson needle through the lower eyelid at the junction of the lateral and medial thirds of the inferior orbital rim parallel to the orbital floor, first to a depth of 25mm, then angled up medially and advanced toward the apex to the hub of the needle." This description occurs in many textbooks

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Under the Covers

Gary Fanning, MD

Review of orbital regional anesthesia

From Nimes, France, Drs. Ripart, Nouvellon, and Chaumeron have written a superb review article of orbital regional anesthesia. It succinctly describes anatomy, block techniques, complications, local anesthetics and adjuvants, controversies, and future directions. It is a very well-referenced, enjoyable paper.

Reference: Ripart J, Nouvellon E, and Chaumeron A. Regional anesthesia for eye surgery. *Regional Anesthesia and Pain Medicine* 2005; 30:72-82.

Editor's Note: I was most honored to meet Dr. Ripart in London at the World Congress of Ophthalmic Anaesthesia in April 2004. He is a delightful man. At the moment, he and his colleagues are among the most active in the world in conducting research on and writing about orbital regional anesthesia. This review article is very well done and should be in each of our personal libraries. I encourage everyone to seek out this journal and read this article.

A different "awareness" case

A woman was awarded $500,000 by a jury because she experienced intense pain during a 90-minute procedure to exchange an IOL under regional anesthesia. This brief report, along with others, was published without details in an article about awareness under anesthesia in the *Outpatient Surgery Magazine* in December 2004.

Interest in awareness under anesthesia has been elevated by the popular press to the point that JCAHO has now issued a controversial Sentinel Event Alert in an effort to reduce its risk, which some people estimate to occur as often as 1 – 2 per 1000 cases. The article summarizes the contents of the Sentinel Event Alert:

1) providing staff education and recognizing high-risk patients
2) premedicating with amnesic drugs when light anesthesia is to be used
3) giving more than a sleep dose of inducing agent when induction is followed by immediate intubation
4) not giving muscle relaxants unless "absolutely necessary" and
5) maintaining your anesthesia machine and vaporizers.

The article gives some good advice regarding how to deal with a patient who has suffered this experience, including the recommendation of offering counseling, taking time to explain what might have happened, and being upright enough to say you're sorry.

Reference: Wasek S. Anesthesia Awareness: Your New Malpractice Risk? *Outpatient Surgery Magazine* 2004; 5:10-11.

Editor's Note: There's no doubt that awareness under anesthesia is a hot topic. Look carefully at the recommendations by JCAHO. At the risk of sounding more cynical than I already am, they seem to me to be in the same league as "give plenty of oxygen and maintain the blood pressure." While good advice, I really wonder if there is any good evidence that following these recommendations religiously would truly reduce the incidence of awareness.

Interest in awareness under anesthesia has been elevated by the popular press to the point that JCAHO has issued a controversial Sentinel Event Alert in an effort to reduce its risk, which some people estimate to occur as often as 1 – 2 per 1000 cases.

In addition, I remain skeptical of the incidence of this phenomenon. Do not misunderstand me: I know that awareness occurs, but I don't believe that we have all the answers as to why. In some cases it may simply be negligence on the part of

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You Asked for It!

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is much more routine. Personally I use the foam hand cleaner Alcare or Purell.

– Rick Rivers, MD, Baltimore, Maryland

We all started doing blocks before wearing gloves was commonplace, and we have never changed. We do wear them on selected cases; I guess you might call it "profiling."

Answer #2

We do not normally wear gloves for blocks. We all started doing blocks before wearing gloves was commonplace, and we have never changed. We do wear them on selected cases; I guess you might call it "profiling." As a routine we use Alcare handrub that is kept at each block station, and we use it before doing the block. We prep the patient's skin with an alcohol swab. I have always been very big on hand washing and still am. I use lots of soap and water—frequently. My hands really suffer in the winter. In all my years I have not had any problem. When I watch some practitioners wearing gloves, I believe they make many technical errors, making them less safe than when good technique is used without wearing gloves.

– Clyde Tempel, CRNA, Rogers, Arkansas

Answer#3

At our institution we wear non-sterile gloves and use a finger to identify the landmarks and then never touch the injection site. We wear them so that in case of bleeding we protect ourselves from the patient's blood. When bleeding does occur, we take off our gloves before doing anything further, such as picking up a drug, sponges, or anything else.

We prep the injection site with povidone iodine or alcohol. As long as we don't touch the injection site, using non-sterile gloves isn't an issue. We have never had an injection-related infection in the 17 or so years the Phillips Eye Institute has been open. That includes about 100,000 blocks. Many of our patients are ASA III/IV and/or are immunosuppressed.

We have a can of Quik Care (ethyl alcohol 62.5%) mounted on every cart, and we use it if we don't have time to go to the sink and wash with soap and water. Otherwise, we wash our hands after every patient contact.

– Charley Rich, MD, Minneapolis, Minnesota

Answer #4

I like to wear gloves to protect myself from the patient's blood and to protect the patient from my organisms, whatever they may be. I have to admit to a certain amount of schizoid behavior in this arena. I do wear gloves when doing a block, but I don't routinely wear gloves when starting an IV. The reason is that I am rarely exposed to blood in any uncontrolled sense when starting an IV (I have learned and practiced a very precise, cautious, and bloodless technique over more years than I care to divulge), whereas one cannot predict when there's going to be significant exposure to blood when doing a block. It sounds strange, but in my hands this is certainly true. When teaching, I always tell people to wear gloves when doing a block. I do think it is a good thing to do.

On the other hand, I would be one of the last to condemn anyone for not wearing gloves—provided, of course, that they had practiced good hygiene first. I think that a good practitioner can do a block very safely and hygienically without wearing gloves, but the onus is definitely on that practitioner should an untoward event occur that even hints that not wearing gloves was a possible causative factor. This is the position we place ourselves in when we buy into the concept of "standard of care."

Between patients I wash with Prevacare, but as it makes me sneeze, I think I'm going to have to go back to soap and water.

– Editor •

Allergic Reaction Protocol

Rama Jager, MD and Gary Fanning, MD

Here at the Hauser-Ross Eye Institute we recently had a patient who experienced a definite but non-critical allergic reaction during a fluorescein angiogram. This prompted us to review our procedures and to write an up-to-date protocol. We are publishing here our protocol along with specific directions that will be wall mounted for quick reference. The wall chart was inspired by a similar document available at the website of the Ophthalmic Mutual Insurance Company (www.omic.com/resources/risk_man/forms/medical_office/Fluorescein-WallChart.rtf), although it has been altered considerably for our use. All who wish to copy our protocol and chart are free to do so, and we would be delighted to have comments from readers as to how their protocols might differ from ours.

Severe Allergic Reactions: Diagnosis and Management

(Revised March 20, 2005)

Background

Patients and staff are at risk for developing severe allergic reactions at any time.

The purpose of this protocol is to help all members of the staff at Hauser-Ross to recognize when a severe allergic reaction occurs (diagnosis) and to assist in the definitive treatment of the condition.

Definitions

Anaphylaxis: a severe allergic reaction that is mediated by an abnormal response in the body to a substance (antigen) to which the individual has been previously exposed. The reaction is generated by the body's response to the antigen-antibody complex. A specific protein, IgE, is involved in this type of reaction. As a result of the reaction, several compounds are released into the circulation that have profound effects. The most important of these is histamine.

Anaphylactoid Reaction: a severe reaction to a substance, indistinguishable from anaphylaxis clinically, but not mediated by an abnormal antigen-antibody complex (i.e., IgE is not involved). In this kind of reaction, the offending substance (such as fluorescein) is responsible itself for initiating the chain of events, but the end result is the same: release of histamine and other vasoactive compounds.

. . . we recently had a patient who experienced a definite but non-critical allergic reaction during a fluorescein angiogram. This prompted us to review our procedures and to write an up-to-date protocol.

Pruritus: Itching, in the case of allergic reactions usually associated with hives or a rash, but may be experienced in the mouth and throat as well.

Urticaria: Hives or wheals

Angioedema: Swelling in subcutaneous or submucosal tissues due to increased permeability of blood vessels following the allergic reaction. Can result in swelling in the throat and larynx that can block the airway.

Etiology

Anaphylactic and anaphylactoid reactions can result from exposure to any one of a variety of substances, including many foods and drugs. Insect bites, especially bees and wasps, are also common causes. At Hauser-Ross, the most common substance likely to cause a reaction is intravenous fluorescein dye used when performing fluorescein angiography. Topically applied fluorescein is much less likely to cause such a reaction. Aspirin and non-steroidal anti-inflammatory drugs (Motrin, Advil, Aleve, etc.) can cause anaphylactic reactions more commonly than you may think, so members of the staff as well as patients may

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OAS 19th Annual Scientific Meeting

September 23 – 25, 2005 • Chicago Marriott Downtown

PROGRAM CO-CHAIRS: Steven Gayer MD MBA, Richard Rivers MD PhD
ACTIVITY DIRECTOR: Marc Allan Feldman MD MHS

REMINDER: Check the website www.eyeanesthesia.org for additional information and program updates!

FRIDAY, SEPTEMBER 23

12:50 Welcome Remarks
Steven Gayer MD MBA, President

1:00 Clinical Research: Looking at the Future From Where We Stand Today
Greg Koski PhD MD DSc (Hon) CPI

1:45 Supraglottic Airways and Eye Surgery
David Z. Ferson MD

2:25 Controversies in Pediatric Anesthesia
Michael M. Vigoda MD MBA

3:05 Questions and Answers

3:20 Break

3:35 Succinylcholine and the Open Eye: A Review and a Proposed Algorithm
Elie Joseph Chidiac MD

4:15 Sub-Tenon's Anesthesia: Putting It Bluntly
Chris Dodds MB BS MRCGP FRCA

4:55 Questions and Answers

5:15 Ophthalmic Anesthesia Jeopardy!!!
Steven Gayer MD MBA, Game Host
Gary L. Fanning MD, Referee

6:00 Reception

SATURDAY, SEPTEMBER 24

7:50 President's Welcome Remarks
Steven Gayer MD MBA

8:00 Outpatient Postoperative Analgesia Using an Orbital Catheter after Enucleation
Shannath L. Merbs MD PhD

8:40 Evaluation and Management of Idiopathic Intracranial Hypertension
David T. Tse MD FACS

9:20 Hyaluronidase: Quest for Glory!
Dr. Hamish A. McLure MB ChB FRCA

10:00 Questions and Answers

10:15 Break

10:30 COX-2: CNS, CV, and other Updates: Bridge from Science to Practice
Jeffrey A. Katz MD

11:10 The Patient with a Pacemaker or ICD: Why the Controversy?
Marc A. Rozner PhD MD

11:50 Questions and Answers

12:00 Lunch Break

1:30 Anesthesia Effects on Blood Flow to the Eye
Richard Rivers MD PhD

2:00 Workshop Announcements

2:15 Workshops (Participants may attend 2 of 3)

A. Cannula-Based Ophthalmic Regional Anesthesia: My Way
Chris Dodds MB BS MRCGP FRCA

B. Cannula-Based Ophthalmic Regional Anesthesia: My Way
Hamish McLure MB ChB

C. Needle-Based Ophthalmic Regional Anesthesia: My Way
Gary L. Fanning MD

3:15 Break

3:30 Workshops (Second Session)

A. Cannula-Based Ophthalmic Regional Anesthesia: Pig Eye Wet Lab
Chris Dodds MB BS MRCGP FRCA, Steven Gayer MD MBA, and Hamish McLure MB ChB

B. Needle-Based Ophthalmic Regional Anesthesia: My Way
Randolf R. Harvey BS CRNA

C. Needle-Based Ophthalmic Regional Anesthesia: My Way (Repeat)
Gary L. Fanning MD

SUNDAY, SEPTEMBER 25

7:30 Annual Meeting of the Membership

8:00 Avoiding Pitfalls in Anesthesia Billing (or Bless and Keep the OIG Far Away)
Don R. Hirschman CRNA MHA ND

8:30 Parallel Approach to Orbital Blocks: Let's Track the Needle Tip
Randolf R. Harvey BS CRNA

9:00 Clinical Uses of Dexmedetomidine
Marc Allan Feldman MD MHS

9:30 Questions and Answers

10:00 Case Discussions
Gary L. Fanning MD

11:15 Questions and Answers

12:00 Adjourn

Member Spotlight

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Q: Has the Ophthalmic Anesthesia Society been a helpful organization to you?

Fry: The annual OAS meeting not only enables one to keep abreast of the latest in ophthalmic anesthesia, but also allows networking with anesthesia providers for the largest and most advanced ophthalmology practices in the country. The input of our colleagues from the United Kingdom gives a unique international flavor to the meeting.

Q: Tell us a little about Fry Eye Associates: e.g., location, years in existence, scope of practice, breakdown between MDs and CRNAs, and number of eye cases per year you manage.

Fry: The Fry Eye Associates clinic is located in the St. Catherine Medical Building, which is attached to our hospital. The address is 310 E. Walnut Street, Garden City, Kansas. (Garden City is located in Southwest Kansas, 60 miles from Colorado and 60 miles from the Oklahoma panhandle). I have been in Garden City since 1974. I practice with one partner, William S. Clifford, who joined me in 1995.

Fry Eye Surgery Center was established in October 1997. At our ASC we currently work with two CRNAs, Lynn Dunford and Tom Troy. They are part of Garden Anesthesia Services, P.A., which is a group of eight CRNAs.

In 2004, 3507 cases were performed at this facility (292 per month). In 2004 I performed and managed 1,671 cataract cases.

Q: Does your facility host any pro bono *care for citizens in need? Other charitable work?*

In addition to participating in Mission Cataract USA, we have a hardship program, which applies a sliding scale according to poverty guidelines. For example, if a patient's household income, determined by family size, is less than twice the poverty level as established by the federal government, he or she is eligible for a 50% reduction in charges. Although we have an appropriate hardship policy in place, we never turn patients away because of their inability to pay. •

Tom Troy CRNA and Lynn Dunford CRNA

Employees of Fry Eye Associates: Garden City, Kansas

Allergic Reaction Protocol

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exhibit this phenomenon. Nuts, shellfish, and other foods may also cause it.

Diagnosis

The onset of symptoms usually occurs very quickly after exposure to the offending agent, but delayed reactions can occur. Generally speaking, the most severe reactions are associated with a quick onset. In the case of fluorescein, the most common reaction is simply nausea and vomiting, with an incidence of 1 – 10%. If no other symptoms occur, the reaction will be self-limited. Severe reactions are associated with rash (reddening of the skin, especially of the upper body) or urticaria and pruritus, feeling of a lump in the throat or difficulty breathing (laryngeal edema), wheezing (bronchospasm), chest pain, abdominal pain, diarrhea, low blood pressure, a feeling of impending doom, and/or loss of consciousness. While death is uncommon in the case of a reaction to fluorescein (1 in 220,000 procedures), quick diagnosis and action are required when a severe reaction is occurring. (In patients with a previous reaction to fluorescein, the incidence of nausea is 30%, vomiting 10%, and itching and/or hives 6%.)

Treatment

For nausea and vomiting, simple supportive measures and observation are all that is required (emesis basin handy, cold cloth to the forehead, reassurance). If a rash, urticaria, pruritus, or breathing symptoms appear, a more serious reaction may be occurring, and urgent action is required. ***Please do not administer any treatment other than giving oxygen without immediately informing a physician of the patient's condition.***

[If an allergic reaction does occur,] do not administer any treatment other than giving oxygen without immediately informing a physician of the patient's condition.

Oxygen: The patient should receive supplemental oxygen as quickly as possible, especially if breathing symptoms (throat swelling, wheezing, shortness of breath) occur.

Epinephrine: This drug is the mainstay of treating anaphylactic reactions. In the adult patient, 0.3 – 0.5mg of epinephrine should be given in the lateral thigh muscle. This is the amount of epinephrine in 3 – 5mL of a 1:10,000 solution, which usually comes pre-prepared in 10mL syringes. The dose in children is 0.01mg/kg, which is 0.01mL/kg of a 1:1000 dilution or 0.1mL/kg of a 1:10,000 solution. Additional doses may be required at 10-minute intervals in the case of a severe reaction, but in the clinical setting, only one or two will usually be given prior to the arrival of the paramedics. Intravenous epinephrine is reserved for the worst cases and should be given with great caution due to the danger of inducing serious abnormal rhythms of the heart, including ventricular tachycardia and fibrillation.

Antihistamines: Antihistamines are given to block the action of circulating histamine but have no effect on other vasoactive substances released during anaphylaxis. The H1 blocker diphenhydramine (Benadryl) can be given to adults in a dose of 25 – 50mg every 6 hours. In children the dose is 5mg/kg/day in divided doses. H2 antagonists are also useful and may block the cardiac and peripheral vascular effects of histamine. Ranitidine (Zantac) 75 – 100mg or cimetidine (Tagamet) 300mg may be given intravenously along with the diphenhydramine.

Inhaled Beta-Agonists: If airway symptoms are severe, the use of inhaled beta-agonists may be warranted. For wheezing, albuterol (Ventolin, Proventil) may be given by nebulization, either continuously (usually in the hospital setting) or by metered dose inhaler (home or clinic setting). For laryngeal edema, racemic epinephrine may be given by nebulization (0.5mL placed in a nebulizer with 2.5mL normal saline).

Corticosteroids: Corticosteroids are useful in

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Allergic Reaction Protocol

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PROTOCOL FOR FLUORESCEIN ANGIOGRAPHY SIDE EFFECTS & COMPLICATIONS

(REVISED 3.20.2005)

Side Effects and Complications	Treatment
1. Nausea and vomiting	• Call Dr. Jager (or one of the other physicians) immediately. • Have patient breathe through mouth slowly and deeply. • Give the patient emesis basin, cold cloth to the forehead, reassurance. • Check vital signs and document in chart (pulse, blood pressure, temperature). • Mark in chart that patient was made nauseated by FA.
2. Painful local extravasation	• Apply pressure to site of injection. • Provide icepack to patient to place on site. • Document extravasation in chart.
3. Severe allergic reaction (any of the following): 1. Rash, hives, wheals (urticaria), and/or itching (pruritus) 2. Shortness of breath, difficulty breathing, wheezing 3. Lump in the throat, difficulty talking or swallowing 4. Abdominal pain and/or sudden diarrhea 5. Low blood pressure (feeling faint) 6. Feeling of doom or loss of consciousness	• Discontinue offending agent (fluorescein, etc.). • Place patient in supine position. • Call for help and have someone call 911 for ambulance transport to ER. • Check ABCs (airway, breathing, circulation). • Inform the physician of the patient's condition. • Put oxygen 5L nasal cannula on patient. • Get vital signs (pulse, blood pressure, pulse ox, temperature) and record in chart. • Get the following medications ready to administer: **Intramuscular Epinephrine** at lateral thigh muscle – for adults: 3 – 5mL of 1:10,000 solution (0.3 – 0.5mg) – for children: 0.1mL/kg of 1:10,000 solution or 1 year: give 1mL 1:10,000 (0.1mL 1:1000) 2 years: give 2mL 1:10,000 (0.2mL 1:1000) 3 years: give 3mL 1:10,000 (0.3mL 1:1000) 4 years: give 4mL 1:10,000 (0.4mL 1:1000) 5 years: give 5mL 1:10,000 (0.5mL 1:1000) *(Epinephrine may be repeated at 10-minute intervals.)* **Oral/IV Antihistamines** – Diphenhydramine (Benadryl) 25 – 50mg – Ranitidine (Zantac) 75 – 150mg **Inhaled Beta-Agonists** – Albuterol (Ventolin, Proventil) – Racemic epinephrine (available from anesthesia in ASC) given in cases of marked laryngeal edema **Intravenous Corticosteroids (requires IV access)** – Hydrocortisone (Solu-Cortef) 250 – 1000mg OR – Methylprednisolone (Solu-Medrol) 125 – 250mg *Transfer to Kishwaukee Community Hospital ER.*

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MEMBER SPOTLIGHT

Luther Fry, MD

Welcome to "Member Spotlight," a new feature of *OASIS*. Each issue will feature an interview with one OAS member. This issue kicks off with an interview of Luther Fry, MD, of the Fry Eye Institute.

Q: When did you join OAS?

Fry: I have been an OAS member since 1993—12 years.

Q: How many staff do have?

Fry: 45 on the payroll, 36.5 full-time equivalents. We have one staff pool for both our clinic and surgery center. Many employees help at both locations.

Q: What kinds of procedures do you do at Fry Eye?

Fry: I primarily see cataract patients and general ophthalmic cases. My partner, Dr. William Clifford, sees cornea, glaucoma, as well as general ophthalmic cases.

In addition, visiting doctors assist at least once a month and include three vitreo-retinal specialists from Wichita, Kansas; an oculoplastic specialist from Denver, Colorado; and a pediatric/stabismologist from Oklahoma City, Oklahoma. We also have an ocularist who visits as necessary to make and fit prostheses.

We have one optometrist who also serves as the Practice Administrator. She does not fit or prescribe glasses or contact lenses; instead, she helps with pre- and post-op care, sees or triages work-in patients, and follows some diabetics and glaucoma patients.

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Allergic Reaction Protocol

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the continuing management of anaphylaxis. As the onset of their action may be measured in hours, it is wise to administer them early. Hydrocortisone (Solu-Cortef) or methylprednisolone (Solu-Medrol) may be given intravenously in doses of 250 – 1000mg or 125 – 250mg, respectively.

Others: Additional therapy by be required, which is more properly given in a hospital setting. Glucagon, which has several positive effects on the heart, may be given. It may be especially helpful in patients taking beta-blocking drugs, but it can be helpful in others as well. Due to the loss of fluid from the circulation into the peripheral tissues during a severe reaction, it may be necessary to administer large volumes of fluid to maintain an adequate blood pressure and cardiac output during anaphylaxis. Once again, due to the requirements of monitoring and continuing care, this is most appropriately done in the hospital even though it may be initiated in the clinic.

References

The Diagnosis and Management of Anaphylaxis from the Joint Council of Allergy, Asthma, and Immunology Website: www.jcaai.org/pp/anaph_toc.asp

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