**Student Paper Abstracts**

**Intravenous Emulsified Isoflurane for Cardioprotection Against Myocardial Ischemic Injury in High-Risk Patients**

Jeremy D. Johnson, RN, BSN and Amanda Hope Q. Gu, RN, BSN

Surgery increases the morbidity and mortality for patients with ischemic heart disease. Inhalational isoflurane has demonstrated cardioprotective effects in animal studies. Intravenous emulsified isoflurane may have the same benefits and provide an alternative route of administration. The authors’ purpose is to evaluate the cardioprotective effects of emulsified isoflurane in animal models for potential attenuation of myocardial ischemic injury in high-risk patients.

A literature search was conducted using the Google Scholar, Medline, ScienceDirect, Academic Search Premier, and PubMed databases to obtain relevant information pertaining to the research question. Eight randomized trial studies were selected for this paper.

Based on the animal models, intravenous emulsified isoflurane maintained the cardioprotective effects of inhalational isoflurane. Intravenous emulsified isoflurane reduced myocardial infarction size, and attenuated cellular injury as evidenced by abatement of rise in cardiac enzyme activities. Immunohistochemical analysis of postexperimental myocardial tissue also revealed advantages of emulsified isoflurane. In addition, analysis of cardiomyocyte apoptosis indicated that emulsified isoflurane treatment significantly decreased the apoptotic index. Emulsified isoflurane could have the potential in providing cardioprotection against myocardial ischemic injury in high-risk patients undergoing surgery.

**Is Prophylactic Epidural Blood Patch as Effective as Other Means for Treating Post Dural Puncture Headache?**

Rebecca Weaver, RN, BA

The purpose of this article is to evaluate the current literature concerning the effectiveness of a prophylactic epidural blood patch compared to conservative treatment and saline patch for post dural puncture headache. Multiple electronic databases were searched and limited to the last 30 years, patient age 16 years or older, and a prophylactic epidural blood patch within 24 hours of dural puncture. The outcomes evaluated were incidence, severity, and duration of post dural puncture headache. Four out of five trials had reduced incidence (p < 0.05) of headache with the prophylactic epidural blood patch compared to the other treatments. The severity of headache with the prophylactic epidural blood patch compared to the other treatments was analyzed in two trials and was found not significant (p > 0.05) in one trial but significant in another trial on days 1, 2, 3 not significant days 4, 5, 6. The duration of post dural puncture headache was assessed in only one trial. The prophylactic epidural blood patch was significant (p < 0.05) compared to other treatments. There are too few participants and studies to draw reliable conclusions. Large trials of prophylactic epidural blood patch versus other treatments at multiple medical facilities are necessary.
ABSTRACTS

Medical Complications of Eating Disorders and their Effects on Anesthesia Delivery
Heather Marcella, RN, BAN, TNCC and Christine Strandquist, RN, BSN, CCRN, TNCC
The prevalence of eating disorders has increased over the last 25 years but remains underestimated. Anorexia Nervosa and Bulimia Nervosa, collectively known as eating disorders, are mental illnesses that have many serious physiologic and anatomical consequences to multiple body systems. The complications that result from eating disorders present unique challenges to delivering anesthesia throughout all phases of the operative period. This paper will review current research on the cardiac, gastrointestinal, and pain perception complications in patients suffering from eating disorders and the anesthetic implications that evolve. Methods used to access the current literature include: MESH database, PubMed, EBSCO HOST, and Google scholar databases were searched and 24 articles reviewed. For this paper 4 review articles, 15 experimental trials, 3 case reports, and 1 comparative case study will be used. The adjusted interventions necessary for providing anesthesia to eating disorder patients are presented systematically to include the preoperative, intraoperative and postoperative period. To conclude, while Anorexia Nervosa has been recognized for over 1500 years, there is still more to be studied. Research is warranted that examines male subjects, pain perception, or the different physical manifestations at different courses of the disease.

Airway Ultrasonography to Confirm Correct Endotracheal Tube Position
Brian Jacobs, RN, BSN and Joseph Pruis, RN, BSN
Confirming endotracheal tube (ETT) placement is essential to prevent untoward complications associated with tube misplacement. Ultrasonographic airway examination may be a viable alternative to standard methods of ETT placement confirmation. Using the Medline database, we searched for studies evaluating the feasibility of ultrasonography for ETT placement confirmation. Of the 207 articles retrieved, 16 articles are shared in the review. Three approaches to ETT confirmation were identified: transtracheal, transthoracic, and diaphragmatic. The transtracheal approach was most studied and placement confirmation was reliable compared to standard placement confirmation techniques. All techniques were learned by study participants with relative ease in a short training period, and could be performed in a timely manner. Airway ultrasonographic techniques to confirm ETT placement may be of most benefit in specific populations including pediatrics, obese patients, and patients requiring emergent intubation. Ultrasonography is a viable secondary confirmation technique but this approach may be less applicable for routine clinical use, especially in light of current advanced airway management devices and techniques.

Should Glidescope Video Laryngoscopy Replace Direct Laryngoscopy for Routine Endotracheal Intubations?
Julie Tait, RN, BSN and Heidi Haider, RN, BSN
Tracheal intubation is a necessary skill performed by anesthesia providers. Video laryngoscopy is technology that originally was made available to help aid visualization of anticipated difficult airways. Currently, many providers are utilizing video laryngoscopy for routine endotracheal intubations. The purpose of this review of literature is to evaluate if video laryngoscopy should replace direct laryngoscopy for routine endotracheal intubations. A literature search was conducted using the PubMed/Medline and Google Scholar databases for research articles including information on direct laryngoscopy and video laryngoscopy. Two meta-analysis articles, 11 comparative studies, 1 observational study, and 6 case studies were selected for use in our review. Generally, video laryngoscopy was found to take more time than direct laryngoscopy, first attempt to intubation was higher than direct laryngoscopy, and video laryngoscopy was found to improve the glottic view when compared to direct laryngoscopy. Hemodynamic measures were unchanged when comparing video laryngoscopy and direct laryngoscopy. Sore throat, dental damage, and tissue injury were complications seen with direct laryngoscopy and/or video laryngoscopy. Because tracheal intubation is a necessary skill for anesthesia providers to have, information on different intubating devices and techniques is important to explore. This information will be helpful guiding providers to make knowledgeable decisions with their choices.
Effect of Needle Selection on Post Dural Puncture Headache Risk Following Lumbar Puncture
Louie Arcenas, RN, BSN, Mark Walz, RN, BSN

Viscoelastic Assays as Predictors of Mortality After Acute Traumatic Injury
Brandon Alt, RN, BSN and Aaron M. Hall, RN, BSN

Are Closed-loop Anesthesia Delivery Systems Safer and More Effective Than Manual Delivery of Propofol in General Anesthesia
Jonathan Jensen, RN, BSN Shannon McCrory, RN, BSN

The Use of Dexmedetomidine for Planned Awake Fiberoptic Intubation
Benjamin Gillmer, RN, BSN, Travis Leigh Krumholz, RN, BSN

Are Sevoflurane and Nitrous Oxide Effective Analgesics During Stage 1 Labor?
Kaitlin J Huth, RN, BSN, Crystal Smith, BSN, CCRN

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Jodie L. Lester, RN, CCRN

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Is Prophylactic Epidural Blood Patch as Effective as Other Means for Treating Post Dural Puncture Headache?
Rebecca Weaver, RN, BA

High Thoracic Epidural Anesthesia as the Sole Anesthetic in Coronary Artery Bypass Graft Surgery
Shirmyl Alviza, RN, BSN, Manita Dhungel, RN, BSN

Does the Use of Intracuff Alkalinized Lidocaine Reduce Endotracheal Tube-Induced Emergence Phenomena?
Erika L. Beining, RN, BSN and Nancy R. Reiland, RN, BSN

Is Chloroprocaine Superior to Lidocaine and Bupivacaine for Subarachnoid Block in the Outpatient Setting?
Elizabeth A. Cleary, RN, BSN and Carissa R. Currier, RN, BSN

Medical Complications of Eating Disorders and their Effects on Anesthesia Delivery
Heather Marcella, RN, BAN, TNCC and Christine Strandquist, RN, BSN, CCRN, TNCC
Abstracts

Effect of Needle Selection on Post Dural Puncture Headache Risk Following Lumbar Puncture
Louie Arcenas, RN, BSN and Mark Walz, RN, BSN

Statement of research question: Post-dural puncture headache is a common complication after a lumbar puncture. Many variables are implicated in its pathogenesis. Needle gauge and design are two important variables responsible for the prevalence of post-dural puncture headache. This synthesis paper studies the effect of needle selection in reducing the incidence of post-dural puncture headaches.

Methods of the study: A search of Google Scholar, Cochrane, and PubMed databases for articles in English on the topic of post-dural puncture headache in humans occurred. Inclusion criteria included articles comparing needle size and design. Twenty-eight articles met the criteria, which included 2 meta-analyses. Assessment and grading of randomized controlled trials left 12 studies. Other articles included 2 prospective experimental studies, 2 retrospective studies, 8 nonexperimental descriptive/correlational studies, and 2 case studies.

Results: Articles searched demonstrated a 2% incidence rate of post-dural puncture headache using 29 gauge needles and a significant increase to 32% when using 20 gauge needles. Traumatic needles have a 7.1%-49% post-dural puncture headache incidence rate while atraumatic needles have a 3.1%-36% incidence of post-dural puncture headaches.

Conclusion: The use of smaller gauge needles can result in a lower incidence of post-dural puncture headache than large gauge needles. The use of traumatic needles increases the incidence of post-dural puncture headaches more than atraumatic needle designs. To decrease the risk of post-dural puncture headache, practitioners should utilize the smallest gauge atraumatic needle with which they are proficient.

Viscoelastic Assays as Predictors of Mortality after Acute Traumatic Injury
Brandon Alt, RN, BSN and Aaron M. Hall, RN, BSN

Viscoelastic assays, such as thrombelastography and rotational thromboelastometry have been proposed as point-of-care coagulation studies that may be beneficial in early recognition and treatment of the coagulopathic trauma patient. The purpose of this review is to determine the relationship between these assays and coagulation-related mortality. A search of the literature using PUBMED identified several recent prospective and retrospective studies. The viscoelastic components clot and hyperfibrinolysis were consistently associated with mortality across all studies. Based on these findings, viscoelastic assays may possess clinical utility for anesthesia providers in the guidance of resuscitation efforts toward successful outcomes after traumatic injury. Further prospective, randomized research is warranted.

Does the Use of Intracuff Alkalinized Lidocaine Reduce Endotracheal Tube-Induced Emergence Phenomena?
Erika L. Beining, RN, BSN and Nancy R. Reiland, RN, BSN

Endotracheal tubes are invaluable as ventilatory devices in the management of the anesthetized patient. The mechanical stimuli from the endotracheal tube and its cuff may elicit exaggerated airway responses with extubation. The purpose of this review is to assess the effectiveness of intracuff alkalinized lidocaine in reducing indicators associated with endotracheal tube-induced emergence phenomena. A literature search was conducted using the Google Scholar, PubMed, and Medline databases for relevant articles pertaining to the effects of intracuff alkalinized lidocaine on intracuff volume, intracuff pressure, emergence phenomena, and hemodynamic parameters. When intracuff alkalinized lidocaine is compared to intracuff air, the evidence indicates that it is effective (P<0.05) in facilitating diffusion of alkalinized lidocaine across the cuff improving endotracheal tube tolerance and hemodynamic parameters. Intracuff alkalinized lidocaine stabilizes intracuff pressures and decreases the incidence of a sore throat, hoarseness, and coughing. When intracuff alkalinized lidocaine is compared to intracuff saline, the evidence is not statistically significant (P>0.05). Intracuff alkalinized lidocaine offers a therapeutic option to attenuate complications associated with extubation, but further evidentiary support from large-scale trials is needed to evaluate its long-term effectiveness in reducing endotracheal tube-induced emergence phenomena.
The Use of Dexmedetomidine for Planned Awake Fiberoptic Intubation
Benjamin Gillner, RN, BSN, Travis Leigh Krumholz, RN, BSN

Purpose: Anesthesia providers may encounter difficult airways during their practice. An awake fiberoptic intubation can provide a safe, effective way to manage the difficult airway. There are many methods used to perform an awake fiberoptic intubation including the use of local anesthetics, regional techniques, and intravenous sedatives. Dexmedetomidine, an \( \alpha_2 \) agonist, may provide a safe, effective means to achieve ideal intubating techniques when performing an awake fiberoptic intubation.

Methods: A MeSH search using PubMed was conducted, and a literature review performed. The search was restricted to case series, randomized control trials, adults 19 years of age or older, written in English, and conducted in the last 5 years. Of the 21 returned articles 8 studies were selected. Those included 5 randomized control trials, and 3 case series.

Results: While dexmedetomidine provided adequate sedation and hemodynamic stability for successful awake fiberoptic intubations, there wasn't a significant difference when compared to propofol, remifentanil, and midazolam. In addition, both patient and care provider satisfaction resulted in positive outcomes with no significant differences.

Conclusion: When evaluating medications for safe and effective awake fiberoptic intubating conditions, consideration should be given to the use of dexmedetomidine as an adjunct or alternative to remifentanil, propofol, or midazolam.

High Thoracic Epidural Anesthesia as the Sole Anesthetic in Coronary Artery Bypass Graft Surgery
Shirnly Alviza, RN, BSN and Manita Dhungel, RN, BSN

Purpose: This is a research paper to examine the feasibility and safety of high thoracic epidural anesthesia for cardiac surgeries. High thoracic epidural anesthesia has been known to suppress the sympathetic nerve excitation of the heart and dilate the coronary arteries reducing myocardial oxygen consumption and intraoperative ischemia. Patients with an ASA physical status of II through IV and with symptomatic coronary artery disease may achieve a faster recovery time and shorter hospital stay with high thoracic epidural anesthesia during coronary artery bypass graft.

Methods: Google search, PubMed and Medline were used to gather studies for the research. Search term such as thoracic epidural, thoracic epidural for coronary artery bypass graft, and general anesthesia vs thoracic epidural for CABG were used. Various arrangements of the terms were applied and search parameters were set within last 20 years. All abstract were reviewed to include article that used HTEA as a sole anesthetic for cardiac surgeries. Seven nonrandomized prospective studies, one clinical study and one case report were acquired.

Results: All studies found a mean length of hospital stay significantly shorter among HTEA group (p<0.05). Expect one study, all others found hemodynamic fluctuation maintained between 20% of baseline among HTEA group. In all studies no fatalities were recorded. However changes in PaO2 and ETCO2 were found to be clinically none significantly in both HTEA and GA groups.

Conclusion: All studies agreed on the feasibility of HTEA as the sole anesthetic regimen for cardiac surgeries. The data showed that high thoracic epidural aids in the faster recovery time and shorter hospital stay in CABG patients.

Class of 2016 Demographics
In May of 2014 we will welcome 32 new students into the program. Of the 32, 62% are female and 38% are male. These 32 were chosen from a pool of 188 who applied. The overall science/math grade point average is 3.2 on a 4.0 scale. They all have at least 2 years of ICU experience. These students are coming from all over the USA. Home states include MN, WI, AZ, MI, SD, CO, VA, CA, TX, GA, NV, and IL.

Orientation for the new class will take place on May 1-2. A reception for the new class and their families will take place at 3:00 p.m. on Friday, May 2, 2014.

This Semester’s Courses

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NEWS

Welcome New Staff

Elise Riveness
Program Coordinator

Elise Riveness graduated from Bethel University in May 2013 with a B.A. in Communication Studies and a minor in Leadership Studies. She is a proud native of Minneapolis, MN and loves running, biking and baking. This past October she ran the Twin Cities Medtronic Marathon, raising money for World Vision. She also volunteers at her churches’ youth group. Elise is our new program coordinator replacing Veronica Murphy. Veronica is still here and serving other programs. Elise can be reached at erivenes@smumn.edu or (612) 728-5132

Alumni News

Don Beissel, CRNA (‘01)

Don is the current and past-President of the Missouri Association of Nurse Anesthetists (MoANA). He has also provided his patients with non-surgical pain management (NSPM) for the past 5 years. Don has forwarded the cause of pain management practice by writing items for NBCRNA for pain management certification and by working with AANA professional practice committee on creating and revising pain management practice standards.

The below photo shows Don using fluoroscopy to guide the placement of a block.
The nurse anesthesia program has had 737 GRADUATES between 1953 and 2013.

TRANSCRIPTS
To obtain your transcript please send a request to the Assistant Registrar of the Twin Cities Campus. Please include your name, student ID number, the years of attendance, the number of transcripts needed, where you want them sent, and your signature. We do not have copies of diplomas.

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Saint Mary’s University of Minnesota
2500 Park Avenue
Minneapolis, MN 55404-4403

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In accordance with federal regulation, the student/alumni must give permission for any information to be released by the University. Verifications cannot be done over the phone. Please sign a consent form from your employer or send a request with your signature to:

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Cost $60.00 – CRNA’s
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Nurse Anesthesia Program
2500 Park Avenue
Minneapolis, MN 55404
ATTN: Elise Riveness

Website
www.smumn.edu/anesthesia

Saint Mary's University - Anesthesia

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The graduating Class of 2013 completed the Nurse Anesthesia Program on August 16, 2013. We wish them all the best in their new careers.

Congratulations Class of 2013

The graduating Class of 2013 completed the Nurse Anesthesia Program on August 16, 2013. We wish them all the best in their new careers.

Mark your calendar! 2014 Student Seminar May 17, 2014

Upcoming Events

- September 2, Labor Day
- September 3, Fall semester begins
- October 11-13, MANA Meeting
- November 8, Registration for Spring Semester begins
- November 28 and 29, Thanksgiving Break
- December 13, last day of the semester
- December 24 to January 2, Campus Closed
- January 4, Spring Semester begins
- May 17, 2014 Student Seminar
News

Senior Presentation Topics for the 2014 Student Seminar

The Class of 2014 has finished writing their proposals for their senior synthesis paper. As with previous classes, we have an excellent selection of interesting topics lined up for the 2014 Student Seminar scheduled for May 17, 2014. Next years topics include:

- Anesthetic Considerations for the Patient With Congenital Long QT Syndrome
- Viscoelastic Assays as Predictors of Mortality After Acute Traumatic Injury
- Are Sevoflurane and Nitrous Oxide Effective Analgesics During Stage 1 Labor?
- Is Chloroprocaine Superior to Lidocaine and Bupivacaine for Subarachnoid Block in the Outpatient Setting?
- Airway Ultrasonography to Confirm Correct Endotracheal Tube Position
- Should Glidescope Video Laryngoscopy Replace Direct Laryngoscopy for Routine Endotracheal Intubation?
- Effect of Needle Selection on Post Dural Puncture Headache Risk Following Lumbar Puncture
- Is Prophylactic Epidural Blood Patch as Effective as Other Means for Treating Post Dural Puncture Headache?
- Are Closed-Loop Anesthesia Delivery Systems Safer and More Effective Than Manual Delivery of Propofol in General Anesthesia?
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- Does the Use of Intracuff Alkalinized Lidocaine Reduce Endotracheal Tube-Induced Emergence Phenomena?
- Medical Complications of Eating Disorders and Their Effects on Anesthesia Delivery
- High Thoracic Epidural Anesthesia for Coronary Artery Bypass Graft Surgery

Abstracts from these papers will begin to appear in the next newsletter along with registration information.

Keith Fruzland (’13) and his family welcomed twins!

Happy first birthday to Brook Newell’s (’13) bundle of pure joy!
University News

Brother Robert Smith, FSC, Ph.D., has been announced as vice president of the Schools of Graduate and Professional Programs at Saint Mary’s University of Minnesota. In his new role, effective June 1, Brother Robert will lead the university’s graduate schools, which have campuses in Minneapolis and Nairobi, Kenya, and centers in Apple Valley, Rochester, Oakdale, and numerous other locations in Minnesota, Wisconsin and Jamaica.

“My vision is to continue and enhance the extraordinary work Saint Mary’s has done in the Twin Cities for the last 30 years,” said Brother Robert. “We will utilize our strong Lasallian Catholic tradition to continue providing quality, accessible, affordable and creative educational opportunities to our adult students.”

Brother Robert, a Saint Paul native and 1976 graduate of Saint Mary’s Winona campus, including associate professor and chair of the Theology Department, associate dean for the School of Education, vice president of mission, and director for the Center for the Enhancement of Learning and Teaching. He also served as dean of Christ the Teacher Institute for Education at the Saint Mary’s campus in Nairobi, Kenya. Most recently, Brother Robert was granted a leave of absence from Saint Mary’s to serve as vice president for academic affairs at Bethlehem University in Bethlehem, Palestine.

Brother Robert will fill the position previously held by Dr. Marcel Dumestre, who retired after holding the role since June of 2010. Dr. Dumestre was instrumental in the creation and development of Saint Mary’s first national online programs.

Brother Robert holds a Ph.D. in moral theology from Marquette University, an M.A. in religious studies from United Theological Seminary, and bachelor’s degrees in psychology and theology from Saint Mary’s University.

ATTENTION ALUMNI

If you have news, events, updates, or accomplishments that you would like to share, please send them to: mmoody@smumn.edu

Student News

Congratulations to Brandon Alt, recipient of the Indiana Association of Nurse Anesthetists Scholarship sponsored by Indiana Association of Nurse Anesthetists. Brandon was considered along with over 500 others to receive one of the 54 scholarships that were awarded. For more information of applying for scholarships, visit the AANA Foundation website

Fall Semester Courses

FIRST YEAR STUDENTS
- Anatomy and Physiology 1
- Principles of Anesthesia 1
- Pharmacology for Nurse Anesthetists

SENIOR STUDENTS
- Clinical Practicum 3
- Synthesis Paper
- Professional Aspects: Department Management
There have been 737 graduates from this program since 1953.

TRANSCRIPTS
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Saint Mary’s University of Minnesota
2500 Park Avenue
Minneapolis, MN  55404-4403
FAX: 612-728-5121

Our librarians are awesome!
Check out the story on the Experience SMU! website.

One last photo...The Class of 2013

We’re on the Web!
www.smumn.edu/anesthesia

Find us on Facebook!
Welcome Class of 2015

The Class of 2015 comes to us from Hopewell Junction, NY; Verona, Madison, River Falls, New Berlin, and Green Bay, WI; Los Angeles, CA; Richland, WA; Fargo, ND; Stone Mountain and Atlanta, GA; Gallup, NM; Bessemer, MI; Columbus and Hilliard, OH; Salem and Portland, OR; Gering, NE; Fresno, TX; Pine Island, Eagan, Minneapolis, Saint Paul, Coon Rapids, Mounds View, Maple Grove, Brainerd, Chanhassen, Sartell, Bemidji, Shorewood, Inver Grove Heights, and Pine Island, MN. Please join us in welcoming the newest members of the anesthesia community.

Which Muscle, the Orbicularis Oculi, Corrugator Supercilii, or Adductor Pollicis, Best Assesses Optimal Intubating Conditions, Maintenance of Anesthesia, and Skeletal Muscle Recovery?

Jennifer R. Kempen, SRNA and Marissa Myhre, SRNA

Neuromuscular blocking agents play an essential role in general anesthesia. Differences in monitoring neuromuscular blockade exist among anesthesia providers. The purpose of this synthesis paper is to evaluate which muscle, the orbicularis oculi (OO), adductor pollicis (AP), or the corrugator supercilii (CS), best assesses optimal intubating conditions and skeletal muscle recovery. A literature search was conducted using PubMed and Google Scholar. Four articles were selected to evaluate onset of neuromuscular blockade and 3 articles were selected to evaluate recovery from neuromuscular blockade. When evaluating onset of neuromuscular blockade, all of the articles found the OO relaxed before the AP. When evaluating which muscle to assess neuromuscular blockade for intubation, two studies recommended monitoring the OO, one study recommended using the CS, and one study recommended using the AP. All 3 articles evaluating recovery of neuromuscular blockade recommended using the AP for safe extubation. Anesthesia practitioners can increase patient safety during intubation and maintenance of anesthesia and significantly reduce postoperative morbidity and mortality if neuromuscular monitoring standard of care measures are implemented.
Perioperative Ketamine Administration to Reduce Postoperative Opioid Consumption and Visual Analog Pain Scores in the Opioid-Dependent Patient
Britanni N. Engen, SRNA and David Truscinski, SRNA

Pain management is a principal foundation of anesthesia. As the opioid-dependent patient population continues to grow, alternatives to treating pain in this group is necessary for optimal pain management. The purpose of this article is to review and evaluate current literature on the use of preoperative, intraoperative, and postoperative ketamine on post operative pain in the opioid-dependent patient population. We conducted a search using PubMed, Google Scholar, Medline, and the Cochrane Library to find experimental trials using ketamine in the chronic opioid-dependent patient population. We found seven randomized controlled trials where ketamine was used as an adjunct in the perioperative period; only one of these studies included chronic opioid users. Our review of the literature revealed that ketamine administered perioperatively reduced morphine consumption postoperatively in both chronic opioid users and nonopioid users. This review is limited because only one study was found that evaluated the chronic opioid-dependent population. From the trial results and the pathophysiology of the opioid-dependent patient, inferences can be made that ketamine would be an effective adjunct in anesthesia management of the opioid-dependent patient.

A Comparison of Tracheal Intubation With and Without Neuromuscular Blocking Agents
Laura B. Swenson, SRNA and Kristina A. Kase, SRNA

Tracheal intubation currently involves the use of neuromuscular blocking agents (NMB). Adverse effects of NMB can lead to increased patient morbidity and mortality. The purpose of this paper was to evaluate if acceptable intubating conditions could be achieved without the use of NMB. Nine articles were reviewed. The outcomes assessed in this review included ease of tracheal intubation, hemodynamic instability with induction, and occurrence of postoperative laryngeal morbidity. The results were inconsistent between articles. Clinically acceptable intubating conditions, both excellent and good, were seen in patients intubated with and without NMB, although the occurrence of excellent conditions was more frequently observed in patients intubated with a NMB. When a NMB agent is omitted, increased doses of induction agents are often required potentially resulting in more frequent induction-related hypotensive events. Two thirds of the studies assessing postoperative laryngeal morbidity found that omitting NMB led to increased incidence of laryngeal morbidity. A relaxant-free approach to intubation may be an alternative in ASA I-II patients undergoing elective outpatient surgical procedures not requiring muscle relaxation, if clinically acceptable, not excellent, intubating conditions are sufficient.

Postoperative Vision Loss as a Complication of Steep Trendelenburg Positioning
Andrea J. Silvola, SRNA and Brook D. Newell, SRNA

Postoperative vision loss (POVL) is a rare but catastrophic surgical complication. The most common ophthalmic injury associated with POVL is ischemic optic neuropathy (ION). A variety of causes have been theorized including unusual eye anatomy, the optic nerve and its blood supply, elevated venous pressures in the head and neck for prolonged durations, prolonged surgery in the prone or steep Trendelenburg position (sTp), and anemia. A new POVL at-risk population has emerged due to technological surgical advancements and the sTp that is required. A literature search was performed using PubMed, Google Scholar, and ScienceDirect. The results of this synthesis paper indicate that sTp and duration of time may increase intraocular pressure (IOP) contributing to ION. Two methods of monitoring IOP are currently available, a handhel tonometer and a visual analog scale. These methods may be used to mitigate the risks of POVL. Current published research regarding POVL focuses mainly on prone-positioned patients. Multicenter research incorporating sTp and procedure duration need to be investigated.
Medical Management for Hypotension in Patients on Angiotensin Converting Enzyme Inhibitor and Angiotensin Receptor Antagonist Therapy Undergoing General Anesthesia
Angela N. Tripp, SRNA and Melinda Stone, SRNA

Is a Preoperative 12-Lead Electrocardiogram Effective in Predicting Major Adverse Cardiac Events in Older Patients Without Cardiac History Undergoing Low-Risk Surgery?
Michael J. Lee, SRNA and Hilary J. Riggin, SRNA

Respiratory Management of One-Lung Ventilation During Thoracic Surgery: Effectiveness of Positive End-Expiratory Pressure
Brett R. Lindsay, SRNA and Keith E. Furzland, SRNA

Which Muscle, the Orbicularis Oculi, Corrugator Supercilii, or Adductor Pollicis, Best Assesses Optimal Intubating Conditions, Maintenance of Anesthesia, and Skeletal Muscle Recovery?
Jennifer R. Kempen, SRNA and Marissa Myhre, SRNA

Perioperative Ketamine Administration to Reduce Postoperative Opioid Consumption and Visual Analog Pain Scores in the Opioid-Dependent Patient
Brittani N. Engen, SRNA and David Truscinski, SRNA

Is Cerebral Oximetry a Useful Monitor for Evaluating Cerebral Perfusion in the Beach Chair Position During Shoulder Arthroscopy?
Angela M. Bilansky, SRNA and Lindsey M. Knapp, SRNA

The Effective Use of General, Combined Spinal-Epidural, and Spinal Anesthesia in the Management of Peripartum Cardiomyopathy
Jeremy A. Heinonen, SRNA and Jonathan N. Roth, SRNA

Effect of Neuromuscular Blockage and Analgesia on Uterine, Umbilical, and Fetal Arterial Blood Flows
Alex Kessler, SRNA and Trena Mallory, SRNA

A Comparison of Tracheal Intubation With and Without Neuromuscular Blocking Agents
Laura B. Swenson, SRNA and Kristina A. Kase, SRNA

Does Isoflurane Affect Cognitive Dysfunction in the Elderly?
LaTasha M. Mohr, SRNA and Joseph M. Ng, SRNA

Intravenous Lidocaine and the Reduction of Intraoperative and Postoperative Opioid Use in Intrapерitoneal Surgery
Kristi Neilson, SRNA and Laura Solverud, SRNA

The Effects of Environment Tobacco Smoke on the Pediatric Patient Undergoing General Anesthesia
Andrea L. Overgaard, SRNA

Guidelines for Neuromuscular Blockade in Patients Receiving Dabigatran or Rivaroxaban
Chandeli Ramos, SRNA and Cecilia Arcinbas, SRNA

Postoperative Vision Loss as a Complication of Steep Trendelenburg Positioning
Andrea J. Silvolta, SRNA and Brook D. Newell, SRNA

Use of Recombinant Activated Factor VII in High Blood Loss Surgeries
Tsering Sangmo, SRNA and Juvelyn R. Pintor, SRNA

Saturday, May 18, 2013: 0800 – 1600
Twin Cities Campus
*University Center-New Location
2540 Park Avenue
Minneapolis, MN 55404

Cost $55.00 – CRNA’s
$30.00 – Students

Coffee, Soft Drinks and Lunch provided

This program received prior approval from the American Association of Nurse Anesthetists for 5 CEU’s

Code Number: 1027785
Expiration Date: 05/18/2013
STUDENT SEMINAR RESERVATION FORM

NAME:__________________________________________________________________________________
ADDRESS: ______________________________________________________________________________
CITY / STATE / ZIP: ______________________________________________________________________
AANA NUMBER: ________________________________________________________________________

PLEASE MAKE CHECK OUT TO: GRANT ACCOUNT 5309

Cost $55.00 – CRNA’s
$30.00 – Students

*A map for the new location is included as the last page of this newsletter.

CENTENNIAL CELEBRATION WEEKEND & ALL-SCHOOL REUNION WITH CENTENNIAL GALA JUNE 22

In celebration of our university's Centennial, we cordially invite you to a one-of-a-kind weekend in Winona, June 21-23, 2013. The Red Carpet Gala will be a highlight to the extraordinary weekend, which will serve as the culminating event of the Centennial Year. The June 22 Gala will include specially prepared culinary delights, live music, a special tribute to our Christian Brothers, on-campus fireworks and a celebration that will last into the wee hours.

Make plans to also attend the All-School Reunion, with events planned on campus and throughout the community. Numerous events are planned for those celebrating anniversary years (class years ending in 3 & 8), and decade gatherings - to encourage all to attend. Don't miss this opportunity to be a part of history as we launch the second century!

Centennial Red Carpet Gala  All-School Reunion
ALUMNI NEWS

Applications for the Class Starting in 2014

The process for reviewing applications and selecting the next class began in April. Out of 197 applications, 74 candidates will be invited to interview. Seven candidates will join the class from the waiting list.

SMU Anesthesia Students and Alumni Facebook Page Update

Launched in April, 2009, there are now more than 200 members. To join, become a member of Facebook and look for Saint Mary’s Nurse Anesthesia Academic Groups or click on the link below. Currently, students are looking for jobs and paper ideas.

Saint Mary’s Anesthesia Facebook

This Semester’s Courses

NEW STUDENTS
- (NA640) Chemistry & Physics
- (NA635) Professional Writing for Nurse Anesthetists
- (NA630) Professional Aspects of Nurse Anesthesia
- (NA606) Research Design & Statistical Analysis

SENIORS
- (NA781) Synthesis Paper Proposal
- (NA780) Clinical Integration
- (NA771) Clinical Practicum II

GRADUATING SENIORS
- (NA774) Clinical Practicum V
- (NA783) Synthesis Paper Presentation

Class of 2013 program completion date: August 20, 2013. Final Clinical Day: Friday August

ALUMNI SPONSORED CE COURSES

Introducing a brand new CRNA owned continuing education group. We offer top of the line education that includes cutting edge ultrasound training. Our introductory seminar will be held in Big Sky Montana on March 2014. This conference will offer 24 high quality CEs for a very inexpensive price per CE. The lectures and lab are given by and taught by CRNA’s; this is a 100% CRNA faculty. They are the best of the best and represent a very vast geographical and professional group. The event is constructed so you can get your CEs while enjoying everything that the location offers. Please visit our web site for registration material and conference specific lodging and details. This is a CRNA owned group dedicated to the continuing education of CRNAs.

So what makes our program better and different than any other group offering educational seminars? We are 100% CRNA group, which means we know what you are looking for. We understand the history, passion, trends and requirements of being a CRNA. When things change so do we! We offer cutting edge and current clinically relevant material. We know the changes with the NBCRNA and we are gearing up to make sure on a single conference, you will get all your requirements. We talk the same language you do, have the same thoughts and the same goals. WE are you!

Our mission is to always give back and help the future of our profession. One of our cooperative partners is the publisher of CRNA Today E-Journal. A 100% free electronic journal provided to enhance both your clinical and educational work. We are also committed to returning a percentage of your meeting fees to a donation of some kind that will support the future of Nurse Anesthesia. After the meeting we will post our contribution amount and to what organization we contributed.

We also consider it very important to support other CRNA groups. We post links on our web page at no cost to promote other CRNA groups that offer CE because we believe in promoting our practice.

We are different. We are dedicated to you and to OUR profession. Please come and attend our first meeting. Our goal is to be able to offer several meetings a year at diverse and select locations. We need our meeting to be successful. Please register now.

Please visit www.trollwayanesthesia.com.
There have been 707 GRADUATES from 1952 through 2012.

Commencement Ceremony: Class of 2013

Please join us on Sunday, June 2 at 11:30 AM for the graduation ceremony for the Class of 2013. The ceremony is being held at the University Center, 2540 Park Avenue, Minneapolis. Parking is available on the street or in the parking lots behind the university. If you are an academic or clinical faculty member and would like to participate in the processional, please contact Elizabeth Adamsick at (612) 728-5132.

Though the students will not finish until August 20, this is one of the last times they will be together as a group before they start their new careers. The commencement exercises are followed by a reception. Please plan to attend and help our students celebrate!

TRANSCRIPT REQUESTS

To get your transcript, please use the following link:
http://www.smumn.edu/undergraduate-home/about-smu/offices-services/registrar/request-transcripts

We do not have copies of diplomas.

VERIFICATION OF EDUCATION FOR EMPLOYERS

In accordance with federal regulation, the student/alumni must give permission for any information to be released by the college. Verifications cannot be done over the phone. Please sign a consent form from your employer or send a request with your signature to:

Assistant Registrar
Saint Mary’s University of MN
2500 Park Avenue
Minneapolis, MN 55404-4403
FAX: (612) 728-5121

We’re on the web!
www.smumn.edu/anesthesia

Program Staff

Merri Moody
Program Director

Rebecca Stangl
Associate Director

Mary Skelley
Clinical Director

Amy Swartz
Faculty

Elizabeth Adamsick
Program Coordinator
STUDENT SEMINAR RESERVATION FORM

NAME: ____________________________________________________________

ADDRESS: _______________________________________________________

CITY / STATE / ZIP: _______________________________________________

AANA NUMBER: ___________________________________________________

PLEASE MAKE CHECK OUT TO: GNA GRANT ACCOUNT 5309

Cost $55.00 – CRNA’s
$30.00 – Students
Application for 5 CE credits is in process

Please send application and registration fee to:
Saint Mary’s University of Minnesota
Nurse Anesthesia Program
2500 Park Avenue
Minneapolis, MN 55404
ATTN: Veronica Murphy

NEW LOCATION
Twin Cities Campus
*University Center
2540 Park Avenue
Minneapolis, MN 55404