



Spring 2017
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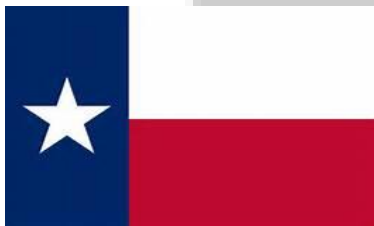
What's TAPANing

The Official Newsletter of the West Texas and Panhandle Region

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Join the wesTpan group on Facebook! Pictures, comments, events are posted regularly!



President's Message

by Sarah Salcido

Time continues to fly by faster than ever. It has been a wonderfully mild winter thus far in the Midland area. Amarillo and Lubbock, however, received their fair share of wintery cold! With spring on the way, flowers and new ideas are beginning to bloom.

The West Texas and Panhandle Region board members have shifted positions. Trina Mora, immediate past-president, has temporarily resigned due to unforeseen circumstances. I (Sarah Salcido) volunteered to act as president at our December meeting and will continue to serve as the treasurer for the time being. There is a possibility that Trina may find her way back to serving as president in the future. In the meantime, we are asking all of our members to become more active within our region. It does not take much of your time to be a big help to the organization. We would love to hear from you through email or facebook! See the "Contact information" section for a listing of current board members and how you can get in touch with them.

Over the past couple months we have been encountering issues while trying to establish a new business checking account under TAPAN as a region. The intent is to ease financial communication between state and regional levels. In the attempt to resolve these issues, Mollie Smith, the TAPAN treasurer, has been called upon for assistance. While the board members are working on this, there will be no interruption in our business as usual.

The TAPAN board had a meeting on February 25th and wesTpan board had one on February 26th. A seminar is in the future for the wesTpan region, so keep your eye out for updates and please let us know if you would like to see anything in particular. The ASPAN national conference will take place in Indianapolis at the end of April. Then, the TAPAN state conference will be in September. And later, Australia will be hosting the 4th International Conference for Perianesthesia Nurses in November (how cool that would be!). Lots of things happening for 2017, won't you join us for the party?

Sincerely,

Sarah Salcido BSN, RN

CONGRATULATIONS!!!

To Vicky Lessing BSN, RN, CCRN, CPAN, CAPA for the achievement of 20 years of CCRN certification! The American Association of Critical Care Nurses (AACN) has recognized Vicky for consistently maintaining her CCRN certification since 1994. Vicky is a recovery room nurse in Abilene and is also a certification coach for the American Board of Perianesthesia Nursing Certification, Inc. (ABPANC). Thank you Vicky, for all of the hard work and compassion you continue to offer to your patients and to fellow nurses! You deserve this recognition!

\$\$ wesTpan Financial Report \$\$

Quarterly report as of February 28th 2017 totals
INCOME (including dues, fundraising, donations):
\$341.07
(Oct & Nov 2017 dues amounts unavailable)
EXPENSES (seminar expenses, meeting expenses,
scholarships): \$ 615.40
BALANCE: \$1409.17

Save the date...

January 9th-March 27th 2017(Spring)

July 10th- September 25th (Fall)

CAPA CPAN exam registration

Exam administration window is open April 3rd- May 30th (Spring)

And October 2nd-November 20th (Fall)

For more information, visit the ABPANC website at: <http://cpancapa.org/>

March 19th

Certified Nurses Day

What will you do to recognize the certified nurses near you?

Share your pictures through our email listed on the contact information!

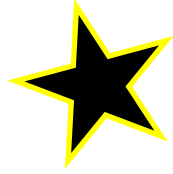
April 30th-May 4th 2017

ASPAN 36th National Conference

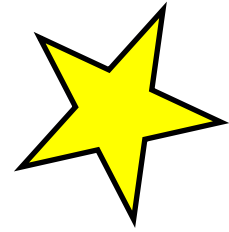
Indianapolis, IN

Energizing Generations. The Race to Distinction.

Early bird registration ends 3/1/17.



wesTpan top sTar-bits



Midland Memorial Hospital (Midland):

In December, Midland Memorial Hospital provided a site for “wesTpan’s PAWs for celebration”, which was a tremendous success that raised a large amount of food, treats, toys, and bedding to the sheltered pets housed and cared for by the Grand Companions Shelter. Perianesthesia nurses came together to share some holiday spirit with some furry friends. Thanks go out to Jessica Herrera for leading this successful heartfelt event.

The poster of some of the animals who were up for adoption is shown to the right. We hope their holiday wishes came true: a loving home. Everyone had fun for a very good cause!



Hendrick Medical Center (Abilene):

October is breast cancer awareness month, as most everyone knows. Perianesthesia nurses, and many hospital employees, showed their support with these fine t-shirts. A few of the PACU nurses (Jonie Criswell, Kat Tollett, Elena Abaquin, Dallas Brown, and Abraham Hernandez) show their support for the cause.



Smiling faces and plenty of food always make for a good celebration.

Pre and post op nurses hold up some of the treats they shared for PANAW. Jamie Melahn, Deb Brown, Tina Medina, Kat Tollett, Nancy Moreno, Randi Davis, and Dallas Brown come together for the festivities.

*****Share the news from your area! Send your top sTar-bits to be included in ***
What's TAPANing to admin@tapan-westtexas-panhandle.com**



Join the wesTpan group on Facebook today! Pictures, events, and announcements are updated often. Share your nursing pictures and comments with everyone!

WESTPAN NEW MEMBERS OF 2017!

Shelly Burrow BSN, RN, AND
Ann Kveton BSN, RN, CPAN
Jae Palentinos BSN, RN
Melissa Rosson BSN, RN
Melanie White BSN, RN

Editor's Note:

What's TAPANing is the official Newsletter of West Texas-Panhandle Region.

Contributions to *What's TAPANing* are encouraged. All articles and comments relevant to Perianesthesia care must be double spaced and typed. The author is responsible for providing appropriate references for accuracy and reliability of information.

Submission Deadlines:

Feb 15th - Spring newsletter
May 15th - Summer newsletter
August 15th - Fall Newsletter
November 15th - Winter newsletter

Send comments, suggestions, and/or submissions (including individual achievements!) to tollettk473@gmail.com

Please...

Feel free to submit any items or ideas you would like to see included to admin@tapan-westtexas-panhandle.com

AND...

Don't forget to join us on Facebook!

wesTpan Region Officers

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Pediatric Emergence Delirium

By Jeanette Garcia CRNA, DNAP

Pediatric emergence delirium, particularly after sevoflurane anesthesia, in the preschool age group remains a potentially serious clinical problem without a definitive solution at present. The literature identifies and compares pharmacologic agents in attenuating emergence delirium, attempts to explain the pathophysiology of delirium, identifies risk factors for delirium, and rates diagnostic instruments for pediatric delirium.

Incidence for emergence agitation can range from 2-80% in preschool pediatric patients following general anesthesia.⁴ Emergence delirium is defined as an altered mental state following general anesthesia and is characterized by increased restlessness, agitation, inconsolable crying, thrashing, and/or cognitive and memory impairment.³ Several tools are used to measure delirium, but the most accepted and reliable tool

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seems to be the Pediatric Anesthesia Emergence Delirium (PAED) scale.⁸ The PAED is a scale consisting of 5 items, which are rated from one to five (extremely to none at all) and a score of 10 or

higher indicated delirium. Items evaluated are eye contact, goal directedness of movements, awareness of surroundings, restlessness, and inconsolability.⁸

Implicated in delirium are the use of either sevoflurane or desflurane anesthesia, and underlying causes are thought to be stress, disordered neurotransmission, and inflammation. Theorized are reduced cholinergic transmission and excessive dopamine in delirium. Inflammatory processes such as TNF_{α} or interleukin-1 are also implicated and thought to alter neurotransmitter release as well as enhance neurotoxicity.¹¹ Confounding factors include pain, anxiety, metabolic derangements as well as underlying neurological disorders. Also, attributed to delirium are the fast “wash-out” of the newer agents due to the low blood gas coefficients of both desflurane and sevoflurane.⁷

Sevoflurane is a 2,2,2-trifluoro-1-(trifluoromethyl) ethyl fluoromethyl ether, called fluoromethyl, which is a non-flammable, sweet-smelling ether used for the induction and maintenance of general

Confounding factors include pain, anxiety, metabolic derangements as well as underlying neurological disorders.

anesthesia.² It is ideal in pediatric patients due to its low airway irritability and its quick onset. It has a blood:gas coefficient of .66, which allows for the quick induction as well as emergence from anesthesia. Its mechanism of action is through modulation of ligand-gated ion channels, receptors, and signal transduction proteins.² At clinical concentrations, sevoflurane enhances the effect of $GABA_A$ receptors, thus inhibiting neural transmission and depressing nervous system activity. As to which subunit of $GABA_A$ sevoflurane interacts with remains unclear.⁶ Other ligand-gated ion channels sevoflurane interacts with include glycine channels and nicotinic Ach channels. Activation of glycine mediated Cl^- channels inhibits neurotransmission whereas inhibiting neuronal nicotinic receptors potentially mediate analgesia or amnesia. Sevoflurane as well as other inhalational anesthetics are thought to also activate 2 pore K^+ channels, which hyperpolarize

neuronal membranes and prevent release of neurotransmitters.² Inhalational anesthetics are also thought to modulate endogenous sleep regulating pathways.²

Sevoflurane as well as other inhalational agents were studied as to their effect on glutamate uptake in astrocytes.¹¹ Astrocytes are a type of glial cell important in maintaining the blood brain barrier, the extracellular fluid composition of the

Timing in administration of the medications was also evaluated and several medications proved more efficacious when given towards the end of surgery...

central nervous system, sustaining neurons metabolically as well as having receptors for neurotransmitters, and ion channels. Astrocytes thus may take part in information signaling in the brain. Glutamate is the most abundant excitatory neurotransmitter in the CNS and all volatile anesthetics enhance uptake by astrocytes thus providing one more way synaptic signal transduction is terminated.¹²

Multiple pharmacological agents have been studied in attenuating the incidence, duration, and severity of emergence delirium in the post-operative period. The use of fentanyl, midazolam, ketamine, sufentanil, propofol, dexmetomidine, nalbuphine, clonidine as well as anti-psychotics and serotonin reuptake inhibitors have shown efficacy in reducing the incidence of emergence delirium. Several drugs have been combined and the combination of multi drug therapy compared to one another. Timing in administration of the medications was also evaluated and several medications proved more efficacious when given towards the end of surgery such as ketamine, propofol, nalbuphine, and midazolam. Route of administration proved important, with pre-operative intranasal fentanyl proving more effective in preventing delirium than IV fentanyl.⁴ One study even evaluated the use of pre-operative oral gabapentin at 15 mg/kg in reducing the incidence of emergence delirium.⁵

When considering the pharmacology of sevoflurane as well as the pathophysiology of

emergence delirium, the effectiveness of pharmacological prevention of particular agents can be elucidated. Alphas-2 agonists provide neuroprotection by modulation of Glutamate while providing sedation without respiratory depression.¹⁰ Gabapentin exerts its effects by a membrane stabilizing effect on amino acids. Implicated in EA has been a reduction in the neurotransmitter, serotonin, thus in part explaining efficacy of SSRI's in selected studies. Excess dopamine has also been implicated in EA, and thus, the anti-psychotics, Haldol, risperidone, and olanzapine have proven effective in the elderly population.¹⁰

In conclusion, much remains to be studied on this subject and a much better understanding of the underlying pathophysiology of emergence delirium will allow more targeted drug therapy and prevention. As the knowledge of the molecular mechanism of action and control of adverse reactions become more precise.



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Jeanette Garcia CRNA, DNAP works at Abilene Regional Medical Center full-time in Abilene Texas. Thank you Jeanette, for allowing us to print your article for our members.

Thank You to the readers,
members, and contributors!
Keep sending those pictures!

