



APGNN

The Association of Pediatric Gastroenterology and Nutrition Nurses

June 2008

Volume 19 Issue 2

President's Message

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Well, I just booked the final leg of my journey to Brazil for the World Congress of Pediatric Gastroenterology, Hepatology and Nutrition August 16th-20th, 2008. I wish more of you were able to join me but please know I'll be attending as your ambassador. The program for the Multi Professional Congress looks very interesting. I just read in the program that Rose Young will be giving a presentation on *Nursing care in pediatric gastroenterology, hepatology and nutrition: opportunities and challenges to the advanced professional*. I'm looking forward to this opportunity and sharing my experience with you on my return. Again, I implore you to let me know if you are attending so we can spend some time together.

I hope you've read the special March/April issue of Journal of Gastroenterology Nursing. The focus is on Pediatric Gastroenterology. All the featured articles were written by APGNN members: Claire Ceballos, Lisa Heard, Stacey Lerret, and Lisa Philichi. In addition, Lori Hartigan wrote an article for the Pedi-Patter department. In the upcoming issue, Kristin Peterson will have a Pedi-Patter article. I've enjoyed my role as editor of the Pedi-Patter column in JGN and I invite you to contact me if you have an article you would like to submit. My goal is to have articles drawn from your experience regarding pediatric gastroenterology nursing issues.

I just returned from Digestive Disease Week in San Diego, where I attended CDHNF board meeting and the NASPGHAN committee chair and council meetings. We were all very saddened by the recent loss of Dr. Sue Moyer. You may remember the excellent presentation on *Transitioning the Pediatric IBD Patient to Adult Care* she gave at our meeting last November in Salt Lake City. If you were there, you'll recall that Dr Moyer thought pediatric gastroenterology nurses were at the top of her hierarchy of nice people. What you may not know, is that she was very supportive of the APGNN CDHNF research grant proposal. Perhaps her work will inspire some of you to develop some great research questions and submit a grant application next year.

NASPGHAN and CHDNF will be celebrating the 10th anniversary of their partnership November 13-15, 2008 in San Diego, California at the Sheraton Harbor Island Hotel. The meeting will be preceded by a special single topic symposium entitled *The Gut Microbiome in Development, Health and Disease* on November 12, 2008. As you know, we won't be holding our usual APGNN education meeting but we plan to have our (continued pg2)

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President's Message Continued

leadership meeting on the evening of November 13 and working and/or committee meetings on the morning and early afternoon of November 14. These working meetings will be open to all APGNN members. Some of the topics we plan to address are updating our strategic plan, putting the final touches on our research grant application and review process, the APGNN website, and our educational program for 2009. I look forward to your participation. You may want to think about joining a committee of your interest now to get ahead of the game.

As your president, our strategic plan is often on my mind. Our number one objective is to be the recognized leaders in pediatric GI nursing and family education by members, physicians, and health-care consumers. It has become clear to me that **all** APGNN members need to work towards meeting this goal. One simple step we can all take is to let everyone, colleagues, supervisors, physicians, patients and families you work with know that you are an APGNN member. You should encourage any pediatric GI nurses you know to join. I've found that families feel reassured knowing that you are a member of a national organization because they know you are keeping up to date with the latest research and treatment of pediatric GI problems. So wear your pin!

Mary-Alice Tully MSN PNP- BC
President APGNN

Membership Committee Report

APGNN Welcomes New Members

| | |
|-------------------------|-----------------|
| Martha Beebe, PNP | North Haven, CT |
| Francene Day, RN | Phoenix, AZ |
| Michelle Hall, RN | Marshfield, WI |
| Erin Knowlton, RN | Syracuse, NY |
| Jacqueline Snediker, RN | Phoenix, AZ |
| Wendy Taylor, PNP | Knoxville, TN |
| Kristen Young, RN | Lexington, KY |

Lisa Philichi, Membership Committee Chair



Past President's Report

2008 APGNN ELECTIONS:

Seeking APGNN Members willing to become involved in this exciting and growing organization. Please consider sharing your time and expertise by nominating yourself or a peer for the upcoming 2008 Elections for:

- Secretary
- Clinical Practice Committee Chair
- Membership Committee Chair
- Newsletter Committee Chair
- Program Committee Chair

Contact Addie McDuffie at addie.mcduffie@chkd.org or call 757-668-9793 for more information.

Program Committee Report

The Program Committee will begin planning for the 2009 conference in the Fall. Look for updates in the September Newsletter.

Research Committee Report

The APGNN applied for a nursing research grant from the CDHNF and received approval for a pilot research project for \$25,000 over two years. As a result of this award, APGNN members will have the opportunity to apply for a research grant next year to fund nursing research in the area of pediatric gastroenterology. Active APGNN members will be invited to submit their grant applications next year and they will be reviewed by members of the APGNN board, the APGNN research committee members and the CDHNF. Review procedures are being developed now. The following APGNN members have kindly agreed to join the research committee – Karen Hlywiak, Nancy Murray, Cari Schwartz and Kathy Hoffstadter-Thal.

Clare Ceballos, Research Committee Chair

Bravo Capsule pH Testing

By: Janis Dice, RN

**Children's Hospital of The King's Daughters
Norfolk, VA**

Overview

Esophageal pH monitoring, considered the gold standard for defining gastroesophageal reflux (GER) in children, is an invaluable diagnostic tool. Conventional pH monitoring involves a nasally placed pH probe that monitors the pH of the esophagus for 24 hours. This technique is both uncomfortable and conspicuous. Children may not eat their normal diet or participate in their normal activities during the study. Additionally, the catheter-based pH probe has the potential to migrate during the study. These disadvantages of conventional pH testing for GER may lead to inaccurate test results.

The Bravo system seems to be better tolerated by a majority of pediatric patients. It is wireless and consists of a capsule and receiver. The capsule is oblong and is approximately the size of a pencil eraser. The capsule contains a pH electrode, a reference electrode, an internal battery and a transmitter encapsulated in epoxy. The Bravo pH capsule measures the pH in the esophagus and transmits this information to the receiver, a pager-sized device worn on the belt or waistband or placed next to the patient. Bravo testing is 48 hours.

The Bravo technique minimizes nasal and throat discomfort and allows children to maintain their normal diet and activities of daily living - attending school, participating in sports and other extracurricular activities - without discomfort or embarrassment. It is also convenient as the patient can bath/shower as the receiver can be placed outside of the shower without interrupting the test.

Despite its advantages, not all children are candidates for the wireless pH probe. Bravo pH monitoring is **contraindicated** in the presence of bleeding diathesis, strictures, severe esophagitis, varices, obstructions and pacemakers or implantable cardiac defibrillators. Potential complications include perforation, hemorrhage, aspiration, fever, infection, hypertension, respiratory arrest and cardiac arrhythmia.

Technical Details

The Bravo pH Capsule with Delivery System (Medtronic) is prepackaged and contains one Bravo pH Capsule and one Delivery System. Prior to use, all equipment should be examined carefully to verify proper function. The capsule must be calibrated prior to endoscopic placement. The capsule is first activated by a magnetic switch and calibrated by submersion in pH buffer solutions. Confirmation that the capsule ID number on the delivery system matches the number shown on the receiver display is necessary. One must also insure that the capsule pin does not advance prematurely.

At our institution, the Bravo pH capsule is placed orally at the completion of upper endoscopy while the child is still under anesthesia. With the delivery system placed in the esophagus, the external pump is turned on to apply suction to the well of the pH capsule, sucking in the esophageal wall. The safety guard on the handle is removed and the activation button depressed. This activates a spring-loaded stainless steel pin which attaches the Bravo capsule to the esophageal wall. Turning the activation button releases the capsule from the delivery system. The delivery system is then removed. The endoscope may then be reinserted into the esophagus proximal to the Bravo capsule, being careful to avoid contact with the capsule, to verify capsule attachment. Several days after the test, the capsule sloughs off of the esophageal wall, passes through the digestive tract and is eliminated from the body.

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Bravo Capsule pH Testing continued

The nurse plays an integral role in pH monitoring using the Bravo catheter-free system. Prior to placement of the pH capsule, the nurse instructs the patient and his caregiver concerning recording of symptoms (heartburn, regurgitation, chest pain, etc.) and events (meals and sleep) using both the Symptoms Buttons on the receiver and documentation in the Patient Diary. Patients are instructed to eat, drink, work and exercise as normal. Patients should not take antacids or reflux medication during the study unless directed by their physician. After the test is completed, the Patient Diary and the Bravo Receiver are returned. The data is uploaded into the computer, one manually enters the diary information and prints the report. The report is then interpreted by the Pediatric Gastroenterologist.

Our Experience

The Bravo pH Monitoring System has been used at Children's Hospital of The King's Daughters since October 2004. Factors considered for use of this testing as opposed to traditional pH testing include the patient's age and size as well as their insurance coverage. 60 children have been tested at our facility using the Bravo system, the youngest being 6 years 4 months of age. The smallest patient weighed 16.6 kg. 2 capsules were removed by endoscopy at the completion of testing for different reasons. One capsule seemed to slough off and enter the stomach prior to completion of the study. One capsule became inoperable after placement.

Future technology might include development of a smaller battery and smaller capsule so that younger and smaller children could be tested for GER with the use of the wireless Bravo pH monitoring system.

Clinical Pearls

*Antacids should be discontinued 6 hours prior to the study, H2 Receptor Antagonist 1 day prior, Prokinetic Agents 3 days before and PPIs 7-10 days, at least 5 days prior or at the discretion of the Pediatric Gastroenterologist.

*Calibration can be performed up to 8 hours prior to insertion of the Bravo capsule and initiation of the study.

*One can have the pH display and beep when symptom button pressed turned on. I turn both functions off when setting receiver parameters prior to calibration. This eliminates the pH display on the receiver display screen during testing and eliminates the beep when symptom buttons are pressed.

*Use lubricants sparingly when used to ease insertion of the delivery system with the capsule. Do not cover the suction chamber with lubricant.

*Some patients have a vague sensation of "something" in their esophagus. Some patients feel the capsule when they eat. Chewing food carefully and drinking may minimize this sensation.

REFERENCES

1. Croffie JM, Fitzgerald JF, Molleston JP, et al. Accuracy and Tolerability of the Bravo Catheter-free pH Capsule in Patients Between the Ages of 4 and 18 Years. *J Pediatr Gastroenterol Nutr* 2007;**45**:559-563.
2. Pandolfino JE, Kahrilas PJ. Prolonged pH Monitoring: Bravo Capsule. *Gastrointest Endoscopy Clin N AM* 2005;**15**:307-318.
3. Medtronic Gastroenterology, Shoreview, MN

APGNN members mourn the loss of Dr Sue Moyer

To honor Sue's memory and friendship and to sustain her work, the Division of Gastroenterology, Hepatology and Nutrition and the Cincinnati Children's Hospital Medical Center will establish the M. Susan Moyer Chair in Pediatric Inflammatory Bowel Disease and the M. Susan Moyer Annual Lectureship on Pediatric Inflammatory Bowel Disease. A contribution was made on behalf of APGNN members for \$200.

Additional contributions to support this combined chair and lectureship are welcomed.

Donations should be sent to:

M. Susan Moyer Memorial Fund

c/o Teresa Heckenmueller

Business Director

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Editor's Note

Calling all authors! I would like to include a list of recently published articles written by our members in upcoming newsletters. Please submit your name and the publication to me so I can pass the information on to the entire membership. I think it is important for members to support your accomplishments. This is a great way to motivate others that want to explore the opportunity of publishing.

I am also looking for members to be identified for future interviews. Once a member is identified, they will be asked to discuss a topic of interest. They will be provided a list of questions to simply answer and return to me. You can submit recommendations for both a person and the topic you would like them to discuss, or simply the topic or person. We want to make sure that the quarterly newsletter continues to be a way to share our expertise with each other between annual meetings.

Have a safe summer!

Diane Kocovsky

Newsletter Committee Chair

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