Esophageal Manometry in Neurologically Impaired Children

Minimal studies regarding abnormal esophageal manometry findings are available in children, and this aspect is certainly true in children with neurologic impairment. The authors of this study evaluated esophageal manometry findings of children with hypoxic-ischemic encephalopathy (HIE). Children with HIE have central nervous system damage early in brain development, and the effects of this damage on esophageal manometry findings are not well described. The authors of this study evaluated the effects of esophageal provocation testing in children with HIE compared to controls. The study was also done to compare esophageal manometry findings in children with HIE who had received therapeutic hypothermia compared to children who received standard HIE care.

A total of 34 children (27 with HIE and 7 controls) underwent manometry studies from a single tertiary children’s hospital. The manometry catheter used for this study was designed with an upper esophageal sphincter (UES) sleeve, pharyngeal port, 3 esophageal ports, lower esophageal sphincter sleeve (LES), and a stomach port which underwent standard water perfusion. Increasing volumes of air were delivered in the mid-esophagus to assess the response to provocative stimulus testing. There was no significant difference in age of the patients studied (approximately 42 weeks for HIE patients and 39 weeks for control infants). Oral feedings were obtained in 37% of the HIE infants. At one year of age, oral feedings was possible in 75% of the HIE infants receiving hypothermia compared to 30% of HIE infants receiving traditional care (P = 0.08).

Peristaltic reflex, UES contractile reflex, and LES relaxation reflex were compared between the HIE patients and control patients. Resting and maximum UES pressure were greater in patients with HIE compared to controls, and the UES pressure values were highest in children who had undergone hypothermia therapy. More polymorphic waveforms were noted in children with HIE, and esophageal manometry revealed lower LES pressure and longer low LES pressure time in HIE patients compared to controls. HIE patients who had undergone hypothermia treatment had a significantly shorter peristaltic response duration. However, there is still concern that children with HIE are at risk of aerodigestive complications. Further studies are needed to determine the best way to feed such children and to determine if certain surgical techniques, such as gastrostomy placement or fundoplication, help or hinder feeding progress in these patients.


Pancreatic Function in Infants with Cystic Fibrosis

Most infants with cystic fibrosis (CF) have pancreatic insufficiency (PI) although some infants have pancreatic sufficiency (PS) at birth that can potentially convert to insufficiency over time. The advent of fecal elastase testing has made testing for PI an easier process. Pancreatic elastase is a protease released from acinar cells that does not undergo bacterial degradation in the intestine. However, it is unknown if fecal elastase levels change over time in infants diagnosed with CF, and the authors of this study attempted to follow fecal elastase levels in a longitudinal fashion.

Study subjects were already enrolled in a docosahexaenoic acid formula supplementation study, and CF was diagnosed by standard sweat testing or DNA analysis of known CF-causing mutations. Fecal elastase levels were determined by an enzyme linked immunosorbent assay. Repeat elastase levels were checked during 5 time intervals between birth and 13.6 months. PI was diagnosed when a fecal elastase level was less than 200 micrograms elastase / gram stool (µg/g).

The study enrolled 61 CF patients who subsequently provided longitudinal stool samples, and 28 of the infants (46%) were homozygous for the ∆F508 mutation. Fecal elastase levels were extremely low (less than 50 µg/g) and consistent with PI in 29 infants in the first measurement. However, 3 of these infants reached normal fecal elastase levels sometime during the study period with their final fecal elastase level falling in the range of PI. One infant with an initial fecal elastase level less than 100 µg/g had a normal fecal elastase level indicative of PS by the time of the last fecal elastase measurement. When all infants with
a fecal elastase less than 200 µg/g were considered, 4 such infants ended with fecal elastase levels in the PS range by study end. Likewise, when all infants with initial fecal elastase levels in the range of PS were considered, 4 infants had a fecal elastase value less than 200 µg/g sometime during the study, and 3 infants ended the study with PI.

This study suggests that fecal elastase levels can fluctuate in infants in the first year of life. Infants initially diagnosed with PI may need a repeat fecal elastase measurement at one year of age to make sure they have not become PS. Likewise, infants found to have PS at birth can progress to PI.


John Pohl, M.D., Book Editor, is on the Editorial Board of Practical Gastroenterology
Taking a Probiotic, Such As Vidazorb®, May Be Helpful for Those Suffering with Celiac Disease

May is Celiac Awareness Month, and during a month when we honor those who suffer with this disease, Vidazorb® wants Celiacs to know that relief may be well within reach. It is important for consumers to know that probiotics may provide the restorative balance their digestive system needs.

Beltsville, MD April 2013–The University of Chicago’s Celiac Center reports that one out of every 133 Americans suffers from Celiac Disease, an autoimmune disorder of the small intestine, also known as gluten intolerance. Yet this number is most likely higher due to the fact that it is a difficult disease to diagnose. With such a large number of people suffering from celiac disease, many will benefit to learn that probiotics may be helpful for nutrient absorption and improved digestion.

Celiac disease is an abnormal digestive condition triggered by the protein gluten. When people with celiac disease eat foods that contain gluten (proteins found in certain grains such as wheat, rye and barley), their immune system responds with a reaction that causes chronic inflammation and damage to the small intestine. This reaction blocks nutrient absorption so no matter how many nutrients enter the body, too few are utilized, leading to malnourishment. Other effects of celiac disease include episodes of depression and anxiety as well as a high level of gut barrier permeability, which allows harmful bacteria into the digestive system at a higher rate.

The key to restoring optimal digestive health after a celiac disease diagnosis is to find a way to absorb necessary nutrients so that the small intestine can work to repair itself. Regular use of effective probiotic supplements like Vidazorb® can aid in immediate improvement as well as ongoing nutrient absorption.

Probiotics are defined as live microorganisms which, when consumed in adequate amounts, provide a health benefit to the host. The main job of these beneficial bacteria is to help digest and absorb nutrients as food particles pass through the gastrointestinal tract (GIT). The GIT contains both good and bad bacteria, and while achieving a positive bacterial balance is important for everyone, it is especially helpful in managing celiac disease on a daily basis.

In addition to restoring intestinal balance, recent research has demonstrated that probiotics help digest gluten particles in the small intestine. Gluten is made up of glutenin and gliadin proteins. Gliadin is the specific cause of the inflammation and tissue damage in those with celiac disease, due to its partial digestion in the small intestine. Probiotics have been shown to assist in digesting gliadin proteins down to harmless peptides and scientists are looking closer into this reaction in people afflicted with celiac disease.

Repairing the gut takes time and, along with a probiotic regimen, those with celiac disease need to adhere to a gluten free diet for the rest of their lives. “When choosing a probiotic to help manage celiac disease, it is important to find one that is gluten free and has a high number of bacteria colony forming units (CFUs),” said New York-based Dr. Anthony Azar. “There are many probiotic supplements on the market, but I recommend Vidazorb® chewable probiotics to my patients. Vidazorb® carries up to 1 billion CFU per tablet, delivering a therapeutic dose of live beneficial microorganisms with each intake.”

So far, studies have been conducted in a simulated intestinal environment, using intestinal epithelial cells from a person with celiac disease. Researchers discovered that bifidobacterium lactis probiotic strains inhibited permeability caused by gliadin. It is important to remember that this does not mean probiotics can replace a gluten-free diet as treatment for celiac disease, but, rather, that they are a helpful addition to a gluten-free diet.

(continued on page 46)
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About Vidazorb®

Vidazorb® Chewable Probiotics are a delicious, convenient and calorie-free way of keeping the digestive system running smoothly. Taking a daily probiotic supplement may help prevent the severity of this discomfort of a wide range of digestive conditions such as celiac disease, irritable bowel syndrome, Crohn’s disease and ulcerative colitis. www.vidazorb.com

NewYork-Presbyterian Hospital Is One of First Hospitals in U.S. to Offer Computer-Assisted Colonoscopy

Remote-controlled system transmits less force on the bowel wall; may allow for a more comfortable and potentially sedation-free examination

NEW YORK - NewYork-Presbyterian Hospital/Columbia University Medical Center is now one of just two hospitals in the United States to offer colon cancer screening using computer-assisted colonoscopy. The new colonoscope, the invendoscope™ SC20 (manufactured by invendo medical and cleared by the FDA) is remotely controlled by the doctor, unlike the traditional colonoscope, which is manually inserted and controlled by the doctor. Because it is not manually pushed and pulled, the remote-controlled system transmits less force on the bowel wall and may allow for a more comfortable and potentially sedation-free examination.

Physicians at NewYork-Presbyterian/Columbia, who began offering this option in February, are hopeful that the new technique will encourage more people to undergo colon cancer screening, especially those who cannot tolerate sedation or are otherwise concerned about sedation or potential discomfort.

Dr. Benjamin Lebwohl, assistant professor of clinical medicine at Columbia University College of Physicians and Surgeons and a gastroenterologist at NewYork-Presbyterian/Columbia, said, “We are trying to encourage people who might not be willing to undergo screening colonoscopy. Fear of pain or discomfort is a common reason why some people don’t undergo colonoscopy, and while sedation can make it more comfortable, many people don’t want to be sedated or are concerned about potential complications from sedation.” Sedation-related complications occur in approximately 1.3 percent of the procedures, according to the Clinical Outcomes Research Initiative Database.

“A screening colonoscopy can be a life-saving preventive health measure,” said Dr. Richard Rosenberg, assistant clinical professor of medicine at Columbia University College of Physicians and Surgeons and a gastroenterologist at NewYork-Presbyterian/Columbia. “But only 65 percent of people who should be screened complete any form of screening, according to 2010 CDC data. A sedation-free colonoscopy might increase the number of people willing to get a screening colonoscopy.”

Colon cancer is the second leading cause of cancer death in the United States. A screening colonoscopy is usually recommended for those age 50 and older who are at average risk for the disease. The test allows for early detection and removal of precancerous and early cancerous polyps. The procedure involves inserting a colonoscope -- a long, flexible, lighted tube -- through the rectum and into the colon. The colonoscope allows the physician to see the lining of the colon and to remove small amounts of tissue, including entire polyps, for further examination.

In previous trials in Germany, where the manufacturer of the invendoscope SC20 is based, only 5 percent of patients undergoing colonoscopy with the invendoscope SC20 required sedation.

The device is currently being evaluated in a clinical trial at NewYork-Presbyterian/Columbia; it is being offered to patients age 50 to 79 who already planned to have a screening colonoscopy with moderate sedation and who meet other health criteria. As part of the trial, investigators will compare the rate of polyp detection with the invendoscope SC20 with that of traditional colonoscopy, to ensure its effectiveness. They will also evaluate other factors related to comfort, safety, and quality.

For more information about the clinical trial, patients can contact newcolonoscopy@nyp.org
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http://www.motilitysociety.org

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Shanghai Expo Center, Shanghai, China – A World Congress in Asia! Submit your abstract and register today and take advantage of Early Bird Registration fees. The Early Bird Registration deadline is April 15, 2013. The Regular Registration deadline is August 15, 2013. For further information regarding the upcoming Congress, visit the Gastro 2013 APDW/WCOG Shanghai website at: www.gastro2013.org

October 11-16, 2013  78th ACG Annual Scientific Meeting and Postgraduate Course
San Diego Convention Center – Excellent faculty and a clinical focus make the ACG Annual Scientific Meeting and Postgraduate Course the premier GI clinical event of the year. Network with your peers, share experiences from your practice, and get unparalleled access to faculty for in-depth discussions on a broad range of cutting edge topics for the GI physician. The ACG Annual Scientific Meeting offers you:

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October 19, 2013  Undy 5000
Hosted by Central Illinois Endoscopy Center
Bradley Park, Peoria, IL – Brought to Peoria by Central Illinois Endoscopy Center. The goal of the Annual Undy 5000 event, a not-for-profit 5k run/walk created by the Colon Cancer Alliance, is to raise awareness about colon cancer and the importance of screening. Event proceeds are used to support colon cancer awareness and research. Contact us to participate, donate and/or sponsor:
www.undy5000.org
Karen Smith:(309) 495-1148
Heather Maganhato: hmaganhato@ciendoscopy.com

October 24–26, 2013  Annual Probiotic Symposium
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San Antonio, TX – Attend the 7th Annual Probiotic Symposium for a unique opportunity to learn about the current perspectives and controversies in probiotics research and use in clinical practice. CME Credit for Physicians and other Healthcare Professionals will be available. Save $100 – Register before October 6, 2013. For more information visit: www.ProbioticSymposium.com

November 1-5, 2013  The Liver Meeting®
Washington, D.C. – Walter E. Washington Convention Center. At its core, The Liver Meeting® is the place for state-of-the-art science in the field of hepatology. Plenary and parallel sessions provide the avenue for specialists to learn about cutting-edge research. Courses, workshops, and symposia provide clinicians with the latest in treatment techniques and options. Exhibits and poster sessions provide networking opportunities for attendees of all experience levels. For those considering a specialty in hepatology, the meeting provides an unparalleled forum in which to network and make an informed decision about a career in hepatology. The study and treatment of liver disease is a collaborative effort that reaches across disciplines and professional backgrounds. Physicians, scientists, surgeons, fellows, nurses, mid-level providers and industry representatives all have a place at The Liver Meeting®

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December 12-14, 2013  Advances in Inflammatory Bowel Diseases, Crohn’s & Colitis Foundation’s Clinical & Research Conference
The Westin Diplomat, Hollywood, Florida – Advances in IBD is the premier conference for healthcare professionals and researchers who study and manage patients with inflammatory bowel diseases. Endorsed by the ACG, AGA, and NASPGHAN, this three-day conference offers exciting workshops and a two-track format designed for clinicians, researchers, allied health professionals, nurses, and pediatric gastroenterologists. Located beachside at the Westin Diplomat in Hollywood, Florida, this is the educational get-away worth attending. For more information visit: http://advancesinibd.com
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PRACTICAL GASTROENTEROLOGY CROSSWORD PUZZLE

DOWN
1. The E in the cell culture medium DMEM
2. Beginning of a disease
3. Uncommon
4. Negative word
6. One cause of pancreatitis
7. Abnormal narrowing
8. Rare stomach disorder, gastric ____
9. Part of the cell containing DNA and RNA and responsible for growth and reproduction
11. Supported by
14. Inner layer of the skin
16. ____dural
18. Sensation preceding a neurological episode
19. Block up
20. ____ wall of an intestine
21. While back
23. French of
24. Aminosalicylates: 5-____ drugs
26. Four corners state
28. Toxic neutralization assays, for short
29. Old, for short
31. Drugs used to reduce gastric acid production
32. It catalyzes the hydrolysis of proteins to smaller polypeptide units
35. Relating to a heart artery
37. Former
38. Pathologist who first described pancreatitis in 1989
39. Cheek
40. Chromosome type
41. Endogenous molecule released as a result of a tissue injury, for short
42. FDA monitoring subject
43. It’s considered to be the primary cell that induces inflammation in pancreatitis, abbr.
45. ____Ai, aka PTGS

ACROSS
1. Compound gland behind the stomach (goes with 12 across)
5. Sick feeling
10. ____esophageal
12. See 1 across
13. Completion of treatment, e.g.
15. Consumes
17. C4H8O4
18. Relating to some muscles
22. Hospital badges
25. Nursing degree
26. Take advantage of
27. The supporting tissue of an organ
30. Decide on a course of treatment, for example
33. ____ canal
34. Enteral alimentation, abbr.
36. For each
38. It accompanies acute and chronic pancreatitis
40. Chromosome type
43. Quality of pancreatic cells
44. Key pancreatic cancer oncogene
46. Replicate
47. Cancer producing

(Answers on page 40)

by Myles Mellor

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