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DIRECTOR'S FORUM

COMMON PROBLEMS OF GASTROESOPHAGEAL REFLUX DISEASE

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A series of informative abstracts of recent developments and observations on the common problem of gastroesophageal reflux disease or GERD have been distributed to physicians recently in Gastroenterology Newslink. These appear of sufficient interest that we have chosen to reproduce them for you:

Talk About Heartburn: More than 283 million cases of gastrointestinal (GI) disease occur each year in the United States at an annual cost of \$42 billion, according to a report presented at Digestive Disease Week. In a study by The Lewin Group, local and national databases were examined to determine the prevalence and costs of gastroesophageal reflux disease (GERD), ulcerative colitis, liver cancer, and 14 other common GI disorders. Foodborne illness and non-foodborne gastroenteritis ranked first and second in prevalence, with 135 million and 76 million cases reported annually in the United States, respectively. The other most prevalent GI conditions were gallbladder disease (20.5 million), GERD (18.6 million), irritable bowel syndrome (15.4 million), and peptic ulcer disease (6.7 million). GERD was the most expensive GI disorder, with annual costs of \$10 billion, followed by gallbladder disease (\$6.5 billion), colorectal cancer (\$5.3 billion), peptic ulcer disease (\$3.4 billion), and diverticular disease (2.6 billion). Research expenditures for GI diseases were \$1.4 billion in 2000, the study found, significantly less than that spent on other diseases with lower health and economic burdens in the United States.

Fuller Fundus: The rate of emptying of the proximal stomach (fundus) contributes to the extent of postprandial (after meal) and 24-hour acid exposure and is a major determinant of the frequency of gastroesophageal reflux (GER), Dr. G. Stacher of University of Vienna and colleagues write in the November issue of Gut. Gastric (stomach) emptying of a semisolid meal and esophageal clearance of a water bolus were recorded in 71 patients with symptoms of delayed gastric emptying and GER who underwent ambulatory 24-hour pH monitoring and esophageal manometry. Slow proximal but not slow distal or total stomach emptying correlated with increased postprandial and 24-hour acid exposure and increased frequency of GER. Proximal stomach emptying was markedly slower in patients with pathological GER. No relationship was found between total or proximal stomach emptying and lower esophageal sphincter (LES) pressure, the researchers said, and the impact of slow proximal stomach emptying on the extent of GER was less than that of low LES pressure.

No Rest with GERD: Nearly 75% of people with frequent symptoms of gastroesophageal reflux disease (GERD), or about 27 million Americans, experience GERD symptoms at night, according to a report in the Jan. 8 Archives of Internal Medicine. Dr. Leath Kleinman of MEDTAP International in Bethesda, Maryland, and colleagues led a national random-sample telephone survey of more than 90,000 adults. Overall, 15% of women and 13% of men experienced at least 1 symptom of GERD on a weekly basis. Of those with weekly GERD symptoms, 74% experienced GERD symptoms at night. The degree of impairment to health-related quality of life experienced by patients with nighttime GERD symptoms is similar to that of patients with other serious chronic conditions including diabetes, hypertension, depression and congestive heart failure, the researchers note.

Cut the Calories: Excessive intake of calories, not fat, is the primary reason why certain meals exacerbate symptoms of gastroesophageal reflux disease (GERD), Dr. Roberto Penagini of the University of Milan, Italy, and associates write in the current issue of the European Journal of Gastroenterology and Hepatology. The conclusion is based on a study of 14 patients with GERD and 13 healthy controls in whom episodes of reflux were counted following the consumption of high-fat and low-fat meals of equivalent caloric content. The incidence of reflux in both groups was similar following high-calorie meals. Calorie-rich meals are often high-fat meals, the researchers note, and the caloric content of high-fat meals, rather than the fat itself, may be the cause worsening GERD symptoms after heavy meals. "In light of the present evidence, there is no sound rationale for clinicians recommending that patients with GERD follow a low-fat diet," they conclude. Comment: Overall calorie reduction to achieve weight reduction may be the most helpful measure for overweight patients.

GERD-Sinus Connection: Children with chronic sinus disease are at increased risk of gastroesophageal reflux disease (GERD), Dr. Edward Wood and colleagues at Pennsylvania's Geisinger Medical Center report in July's Archives of Otolaryngology Head and Neck Surgery. The incidence of GERD was 63% in a group of 30 children with chronic sinus disease who underwent 24-hour esophageal pH monitoring. Additionally, 6 of the 19 patients with GERD had nasopharyngeal reflux. The incidence of GERD in the study group is well above the expected prevalence in the general population, the study team notes. They conclude that patients with chronic sinus

disease should be evaluated for GERD, because diagnosis and treatment of GERD may eliminate the need for sinus surgery in some cases.

Less to Swallow: Surgical treatment of severe gastroesophageal reflux disease (GERD) is associated with a reduction in the use of GERD medications, although the majority of patients still required these drugs, report Vanderbilt researchers in the *Journal of the American College of Surgeons*. Utilization of healthcare resources was determined in 135 patients with GERD who underwent fundoplication and 250 medically treated patients with GERD. Surgically treated patients used more GERD-related outpatient resources during the baseline year, particularly in the 3 months before surgery. In all, 94% of medically treated patients required GERD-related drugs during the follow-up year, compared with 71% of the surgical patients. The mean number of upper gastrointestinal barium studies was higher in the surgical group than in the medical group during follow-up, but no differences were observed between the groups in the use of other healthcare resources.

Don't Stop the PPI (Prilosec, Prevacid, Aciphex, Protonix, Nexium): The majority of patients with gastroesophageal reflux disease (GERD) who undergo antireflux surgery still require medical treatment, Texas researchers write in the May 9 *JAMA*. The outcomes of 129 patients with GERD who were randomized to receive medical or surgical treatment were compared in a study by researchers at the VA Medical Center in Dallas. During a mean follow-up period of about 10 years, 92% of the medical patients and 62% of the surgical patients used antireflux medications on a regular basis. There were no significant differences between the groups in terms of esophagitis grade, frequency of esophageal stricture treatment, subsequent antireflux procedures, general physical and mental outcomes and overall satisfaction with therapy. Survival was significantly lower in the surgical group than in the medical group at 140 months. The annual rate of esophageal adenocarcinoma in patients with and without Barrett esophagus was 0.4% and 0.07%, respectively.

The Risk of GERD and Esophageal Carcinoma: Long-term daily use of drugs that increase gastroesophageal reflux by relaxing the lower esophageal sphincter may be responsible for about 10% of cases of esophageal adenocarcinoma, according to a study by Dr. Jesper Lagergren of Sweden's Karolinska Institute and colleagues in the August 1 *Annals of Internal Medicine*. The investigators determined risk factors for esophageal adenocarcinoma in 618 patients with esophageal cancer and 820 healthy controls. Use of reflux-inducing medications, including nitroglycerin, aminophyllines, beta-adrenergic agonists anticholinergic drugs, and benzodiazepines, was associated with a 3.8 fold increase in the risk of esophageal adenocarcinoma. "The association almost disappeared after adjustment for reflux symptoms, indicating that promotion of reflux is the link between use of lower esophageal sphincter-relaxing drugs and esophageal adenocarcinoma," the researchers conclude. Comment: This report is of interest but further research is required to confirm this conclusion.

3RD ANNUAL POSTGRADUATE COURSE

**Barrett Esophagus and Adenocarcinoma:
Management Strategies from Reflux to Resection
December 6-8, 2001**

Boardwalk Inn, Walt Disney World, Orlando, Florida

For further information contact: University of South Florida,
Office of Continuing Professional Education, P.O. Box 550610,
Tampa, FL 33655-0610, or fax to: (813) 974-3217 or register
online at: www.cment.med.usf.edu.

GETTING THE MOST OUT OF YOUR CONSULTATION OR RETURN VISIT

H. Worth Boyce, M.D.

Before You Come: Find out which medical reports you will need to bring. Don't forget to pack along x-rays of your esophagus (barium swallow or esophagram), CT scans and lab test results.

Our practice is to send you a personal history form to be completed and brought to your first appointment. If you don't receive such a form please compose a list of:

- Medications you are taking
- Past treatments and operations
- Your concerns about your condition
- The specific complaint that you are being seen for at the Swallowing Center Clinic

Thanks to the information you will provide, your esophagologist (physician specialist in swallowing and esophageal disorders) will have a head start in understanding your condition and concerns. He or she will, of course, need to know more. And so will you. With notepad ready, fire away with your questions:

- What studies are necessary to determine my diagnosis?
- What can I expect from the treatment, and what effect may it have on your daily activities?
- Is there anything I can do to prevent further disability?
- Are there any brochures, videos or Internet sites you can review?

Our Swallowing Center is establishing an Internet Access Room for patients that you may use after your visit, if you like. We will also provide a list of medical websites with reliable information you may use with your home computer. We can also provide printed brochures or copies of our Newsletter, Swallowing News that provide helpful information about your medical problem.

Take careful notes and have your esophagologist clarify any medical jargon that might leave you scratching your head once you are back home.

Anticipating Diagnosis and Therapy. After a thorough history and physical examination, your esophagologist will make recommendations. Your list of questions to ask just got longer. Here is a checklist to help you explore your options and get clear on what may be involved:

Be sure to ask about the recommended techniques, risks or possible complications, and prognosis of your condition.

Ask about alternative treatment procedures; the possibility of a second opinion and what the prognosis is if you do not have a recommended procedure.

Be sure to ask whether any tests or preparation will be needed prior to the procedure; the type of premedication; whether there may be any problems following the procedure; the length of recovery and whether you should expect to have any physical impairment after the procedure. Feel free to ask your esophagologist how many similar diagnostic

or therapeutic procedures he or she has performed. Also ask for any literature or internet information about the procedure that you can review

When you leave you should not feel confused, but satisfied that your concerns have been addressed and you have shared in any decisions you and your doctor have made.

CONTINUING MEDICAL EDUCATION

The Center for Swallowing Disorders has continued active participation in graduate medical education by lectures at regional, national and international meetings and by contributions to the medical literature.

Contributions to Medical Literature

Boyce HW. Behavior in the Endoscopy Suite. *Gastrointest Endosc* 2000;52:1.

Theodoropoulos DS, Lockey RF, Rodriguez JA, Boyce HW, Johnson MC, Ledford JK. Upper respiratory symptoms in patients with gastroesophageal reflux. *Am J Respir Crit Care Med* 1999;159:A123.

Boyce HW. Endoscopic definitions of esophagogastric junction regional anatomy. *Gastrointest Endosc* 2000;51:586.

Theodoropoulos DS, Ledford JK, Lockey RF, Pecoraro DL, Rodriguez JA, Johnson MC, Boyce HW. Upper airway symptoms in gastroesophageal reflux disease. *J Allergy Clin Immunol* 2000;105:S72.

Bloomston M, Boyce HW, Mamel J, Albrink M, et al. Videoscopic Heller myotomy for achalasia – results beyond short-term follow-up. *J Surg Res* 2000;92:150.

Coppola D, Lu L, Boyce HW. Chronic esophagitis dissecans presenting with esophageal strictures: a case report. *Hum Pathol* 2000;31(10):1313.

Theodoropoulos DS, Ledford JK, Lockey RF, Pecoraro DL, Boyce HW. Priming of the distal esophagus by repetitive acid reflux is associated with visceral sensitivity. Submitted to *Am J Gastroenterol*, June 2001.

Choudhry U, Boyce HW. Treatment of Esophageal Disorders Caused by Medications, Caustic Ingestion, Foreign Bodies and Trauma, In: Wolfe MM, ed. *Therapy of Digestive Disorders*. WB Saunders, Philadelphia, Pennsylvania, 2000, pg 37.

Lecture Presentations by CSD Staff

February 3-4, 2000: Walter Reed Army Medical Center Grand Rounds. 1) Endoscopic Anatomy of the Esophagogastric Junction: 38 Years of Looking and Learning and 2) Swallowing Matters: A Clinician's Guide to Diagnosis and Therapy. Washington, DC.

March 8, 2000: Milwaukee GI Society. Classification of Esophageal Strictures as a Guide to Therapy. Milwaukee, WI.

May 22-25, 2000: German Endoscopic Society: Measuring the

Length of the Barrett Esophagus: Where is the Zero Line? Hamburg, Germany.

May 24, 2000: Georgetown Theater at Digestive Disease Week. Esophageal Stricture: Dilation and Steroid Injection. San Diego, CA.

May 25-26, 2000: ASGE Annual Postgraduate Course: Endoscopy in the New Millennium. Endoscopic Diagnosis and Treatment of Esophageal Strictures. San Diego, CA.

January 10-12, 2001: The Spectrum of Esophageal Strictures: Etiologic Classification as a Guide to Medical Therapy. Ft. Sam Houston, TX.

January 20-22, 2001: Participant, 12th Endoscopy Masters' Forum. Orlando, FL.

February 9-10, 2001: Participant, Clinical Market Research in Gastroenterology on Emeprazole: AstraZeneca Research Meeting. Coral Gables, FL.

May 21, 2001: ASGE Breakfast of Champions Presentation. Management of Esophageal Strictures: Digestive Disease Week, Atlanta, GA

THINGS TO REMEMBER

OFFICE HOURS:

8:00 a.m. 'til 4:30 p.m. Monday through Friday. Telephone hours: 8:00 a.m. 'til 6:00 p.m. Also, our emergency telephone number for after hours is (813) 974-2201.

BILLING:

Payment for services rendered is due at the time of your visit. Please be prepared to pay any co-payments due at the time of your visit to the Center.

Patients who have problems with their physician or facility fee bills should contact Gayle Stephens, Financial Specialist, at the University of South Florida Medical Clinics at (813) 974-3575 between the hours of 9:00 a.m. and 4:00 p.m. Monday through Friday.

For those patients who are from out-of-town, a new toll-free number has been added for you to call with billing questions. The number is 1-888-873-3627. This number is for calls originating in Florida and is only for billing questions and help with insurance authorizations.

Has Your Insurance Company Or Primary Care Physician Changed?

With an ever changing medical insurance market (shopping for the best contract, companies merging, others closing their doors, etc), you may have changed insurance companies. If you changed your insurance company, you may have a new primary care physician. Maybe you have moved and had to choose a new doctor closer to your home. Regardless of the circumstances, we would very much appreciate you contacting our office to let us know, (813) 974-3374. This will not only insure we can obtain the necessary authorizations/pre-certifications and that your medical bills go to the right insurance company, but it will help us make sure your medical records are forwarded to the right doctors. Thank you for helping us keep the records straight.

MEDICAL STAFF

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INSTRUCTIONS FOR ESOPHAGEAL MANOMETRY (MOTILITY) STUDY

Milton C. Johnson, M.D.

WHAT IS AN ESOPHAGEAL MANOMETRY (MOTILITY) STUDY IN ADULTS?

The esophageal manometry study in adults involves placement of a small tube or catheter into the esophagus or "food pipe." Within the tube or catheter are pressure sensors that measure the amount of pressure generated within the esophagus with each swallow. The tube or catheter is slowly pulled up the esophagus in order to measure pressures with swallows at different locations from the bottom to the top. During the study, important information is obtained about the upper and lower sphincters (valves) and how well they function. The pressures generated within the tube inside the esophagus are displayed on a pressure-recording device that prints the data. The printed data looks somewhat like the results of an elec-

trocardiogram (EKG or ECG). Once the data is completely processed and reviewed by our staff, a report is generated which is mailed to your physician. You must arrange follow-up with your physician for the results of this study.

WHY DO I NEED ESOPHAGEAL MANOMETRY (MOTILITY) TESTING? Many disorders of swallowing may have the same symptom(s). Dysphagia or difficult swallowing is the major symptom described in patients with most swallowing problems. Esophageal manometry (EM) testing assists the physician to further characterize the features of your particular swallowing disorder and how it affects different areas within the esophagus or its sphincters (valves); determine the relationship of your symptoms with EM findings; assessment of whether or not you are a candidate for alternative medical management or surgery.

HOW DO I PREPARE FOR THE TEST? Loose-fitting (front, button up style preferred) clothing should be worn to the examination. Women are advised to wear a two-piece garment. Diet instructions will be provided by the Joy McCann Culverhouse Center for Swallowing Disorders patient care coordinator or scheduler at the time of your initial scheduling. In general, solid food cannot be eaten prior to placement of the EM tube or catheter. After the study is completed, you may resume your diet.

Certain medications may interfere with the EM study. They include: 1) pro-motility agents - Reglan, Propulsid, erythromycin; 2) skeletal muscle relaxants - Lioresal, 3) anti-cholinergics - Levsin, Bentyl; 4) antispasmodics/smooth muscle relaxants - nitrates, nitroglycerin containing compounds and 5) cholinergics - bethanechol. Of these, *Reglan*, *Propulsid* and *bethanechol* will directly interfere with EM study results. Medications such as calcium channel blockers, beta-blockers, narcotics and the anxiety reducing medications are described as having an undetermined effect on esophageal motility. Their use during the EM study should be stated to the patient care coordinator or scheduler at the time of initial scheduling for additional assessment.

WHAT HAPPENS DURING THE EM STUDY? A plastic tube or catheter, one-third smaller than a standard pencil, is placed into the esophagus through the nasal passageway. In order to prepare for placement, the sensitivity of the nasal passageway and throat is reduced by application of an anesthetic gel. The tube or catheter is slowly advanced into the esophagus as you sip and swallow water from a straw. This assists and eases the passage of the tube into the stomach. After confirming the location of the tube, it is slowly pulled upward from the stomach into the esophagus as you swallow water in order to assess the swallowing function, including the lower and upper esophageal sphincters (valves). You will be instructed during the study to swallow only at indicated times to completely evaluate each type of swallow for accuracy of effort. You may be asked to hold your breath for very short periods throughout the EM study to evaluate some of your swallowing efforts.

After the esophageal manometry study is completed, the tube or catheter is removed from the esophagus. Your study will be thoroughly reviewed by one of our medical staff. A report will be forwarded to your physician(s) for review.



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