The concept of a center dedicated to the diagnosis and treatment of patients with swallowing disorders is based on the need for a multidisciplinary approach to patient care. There are many patients who suffer from swallowing disorders but there are few, if any, specialized centers or clinics devoted specifically to the challenge of prompt diagnosis and treatment of these difficult problems. Dysphagia is a symptom and not a disease, consequently it is a manifestation of a large number of disorders involving the oropharynx, esophagus, proximal stomach, and the central nervous system. The confusing presentations and complex etiologies of some swallowing disorders require a careful basic history and physical examination, often an evaluation by at least two consultants and specialized studies before a definitive diagnosis can be made and proper management selected. Severe swallowing disorders often are accompanied by a number of physical problems, especially malnutrition, that may further contribute to the swallowing impairment.

Swallowing disorders are far more prevalent than expected and commonly affect the elderly. One study from New York Hospital-Cornell Medical Center several years ago revealed that over a three week period there was a consistent incidence of swallowing problems in 12 to 13 percent of the patients at each center. As our elderly population increases so will swallowing problems.

Medical and surgical specialists in gastroenterology, otolaryngology, radiology, and neurology have made significant contributions to swallowing disorders that relate to their fields. Speech and language pathologists have been among the leaders in the diagnosis and treatment of neuromotor swallowing disorders involving the oropharynx. The USF Center for Swallowing Disorders has developed a program for a cooperative, multidisciplinary approach to swallowing disorders utilizing these specialists. Our purpose is to provide diagnostic and therapeutic recommendations that will provide rehabilitation and relief of dysphagia and its multiple potential complications.

The program for patient evaluation is based on initial physician referral or self-referral in selected cases. The physician's or patient's initial phone call will be followed up by a return call to the patient by our Patient Care Coordinator to acquire additional information. After an initial screening evaluation by telephone, the patient is requested to obtain pertinent medical records and x-rays. They are also given an appointment for an initial history and physical examination. During this first visit decisions will be made concerning the appropriate studies needed for further evaluation of their disorder. If the patient is determined to have a primary oropharyngeal motor problem, an evaluation by our speech pathologist will be scheduled. A dynamic video esophagram (videotaped barium swallow) that examines both for neuromotor abnormalities and obstructing lesions will be done on most patients. From this point on, consultation between affiliated specialists provides a determination of the need for further evaluation. Diagnostic and therapeutic options are discussed between the consultants. Occasionally, joint examinations by specialists are helpful in achieving a consensus on diagnosis and final recommendations.

There is much to be learned about the normal and abnormal swallowing mechanism and ways to improve our diagnostic and therapeutic techniques. Investigations of the effect of drugs on swallowing, alterations in fluids and solids that may make swallowing easier and safer in certain disabled patients, new diagnostic methods and screening methods to detect cancer of the aerodigestive tract in its early stages, and other projects will be conducted as part of our clinical research program.

The Center for Swallowing Disorders will develop an active postgraduate education program to conduct postgraduate courses for physicians, speech pathologists, and other interested medical professionals. We plan an active public education effort to provide appropriate information on the frequency of swallowing disorders and the importance of their early diagnosis and therapy.

We have been fortunate thus far in receiving excellent fiscal support from individuals and corporations within our community and are hopeful to obtain additional support so that we might expand our specialized services to help the largest number of patients who are unable to swallow normally.

Director's Forum

Center For Swallowing Disorders - University of South Florida Medical Center

H. Worth Boyce, Jr., M.D. • Professor of Medicine and Director
The comprehensive, multidisciplinary approach to the diagnosis and management of the patient with dysphagia (swallowing dysfunction) is one of the newest developments in the field of medicine. A significant body of knowledge regarding the intricate and delicate act of swallowing is just emerging. However, rehabilitation of the patient with swallowing problems is in its infancy. Management largely still is a clinical art.

Unfortunately, there is much still to be learned about the nature and changes in swallowing in various types of illness and about the best methods of management for these problems. In order to develop rehabilitation programs which effectively treat swallowing disorders in various populations, accurate and detailed information about the disorders must be collected and carefully studied.

Currently, our speech pathologists’ are involved in three national research projects to assist in gathering information regarding the prevalence, nature, severity, and progression of swallowing disorders. The following is a summary of these studies:

The first study will examine the management of patients with swallowing disorders. Currently, management plans are determined by one of two ways: 1) clinical examination, or 2) radiographic (x-ray) examination. The clinical exam generally is the most prevalent. However, critical information such as evidence of aspiration can only be evaluated using the radiographic procedure. The outcome of the study will compare these two approaches to the diagnosis and management of swallowing disorders. It is anticipated that patients who are diagnosed and receive treatment based on the radiographic exam will be rehabilitated more rapidly, safely, and successfully than patients whose treatment is based on clinical examination alone.

A second study will compare the speech and swallowing outcomes of various types of surgical operations in patients with cancer of the mouth and throat. Research indicates that treatment is based on clinical examination alone.

Finally, the need to perform a cricopharyngeal myotomy (cutting a swallowing muscle in the throat) as part of surgery to the head and neck is unclear. Some surgeons routinely perform the procedure as it is felt to improve swallowing and prevent aspiration. The purpose of this study will be to determine if the surgery is effective in the treatment of swallowing disorders following head and neck surgery.

The information gathered from these studies will help us to design and provide our patients with the most efficient and effective rehabilitation programs. Advancements in functional rehabilitation can be made only by information garnered from research projects such as these.

Research Notes

Research On Esophageal Dysphagia
Richard H. Davis, Jr., P.A.-C

Our research activities at the Center for Swallowing Disorders are geared toward:
1) better understanding of the normal and abnormal physiology of the esophagus, 2) improved methods of diagnosis, and 3) more effective treatment for our patients with swallowing disorders.

Although no one is completely comfortable with animal research as a method to better understand and treat human disease, it is currently a vital link to this knowledge. The ethical and humane treatment of laboratory animals is of paramount concern to us at the Center. Currently, at the laboratory bench, we are studying the effects of many hormones and peptides (small protein molecules) on the normal function of the esophagus, it’s muscles and nerves. The
This is truly an exciting time in research at the Center. Our efforts are in the early stages, while others have been in progress for the past several years. Specifically, we are focusing on the most effective and safe treatments of stenosis (narrowing) of the esophagus; more accurate diagnosis and staging of cancers of the esophagus and stomach; and improved forms of radiation and thermal therapies for esophageal cancers. Many of these projects are just beginning while others have been in progress for the past several years. This is truly an exciting time in research at the Center. Our ultimate goal is always to provide better understanding, diagnosis, and treatment to our patients at the Center for Swallowing Disorders. In the future, we will highlight some of our interesting and promising research projects in this newsletter.

**Nutrition**

**Nutrition and Swallowing Disorders**

Janet Jones, B.A., CGC

Food is essential for life. Sick or well, the body needs the nutrients in the food we eat for growth and development, and for helping the body heal and defend itself against disease. Most of us get the nutrients we need by eating a normal balanced diet from the four basic food groups: meat, poultry, fish; cereal and bread; fruits and vegetables; and dairy products. A diet of traditional foods from these four groups provides the protein, carbohydrates, fat, vitamins, minerals and water to promote good health.

But you, or someone you may know, may have a swallowing disorder, making eating a normal diet difficult or impossible. Often, this swallowing disorder is the result of an injury or chronic illness which actually increases the body's nutritional needs.

So how can you best go about meeting these needs and speed recovery by getting good nutritional support?

The ideal form of nourishment, and the one we are most comfortable with, is the well-balanced diet of traditional foods. Starting with what you are accustomed to eating, experiment with flavors, textures, and temperatures until you find one you can best tolerate. Use fresh fruits in ice cream, milk shakes, puddings, and custards to add nutrients and calories as well as appeal. Substitute high calorie fruit juices for coffee and tea and try to use them between meals. Keep a food diary to have a general idea of how many total calories you are taking each day.

For people who cannot or will not eat enough to meet their nutritional needs, medical nutritional products are now available for use at home. Many of these products may be eaten or drunk like traditional foods. They are not fad diet beverages. They are balanced meal replacements, containing basic nutrients (proteins, carbohydrates, fats, vitamins, and minerals) in the same proportions as a well balanced meal of traditional foods. These products include pleasant tasting liquids and puddings in several different flavors. To change the flavor and boost the calories, a scoop of a favorite flavor ice cream may be added. These products do not require a prescription but your doctor or dietician can help you pick the best product to meet your nutritional needs.

Carnation Instant Breakfast also provides a relatively well-balanced nutritional supplement for those who cannot take solids or who just need a caloric boost during the day. It is available in three flavors. Various types of puddings are another good source of calories for persons with swallowing disorders.

The Center for Swallowing Disorders has menu handouts and information pamphlets that may help you get started. Please contact us for help with your specific needs. There may be special cookbooks and/or information booklets available through your doctor or dietician.

If you or someone you know has a swallowing disorder, difficulty eating a traditional regular diet, or weight loss, they should first consult their doctor. He/she can perform a simple nutritional assessment and initial diagnostic studies to give authoritative answers to questions about this problem.

**Things To Remember**

1. **OFFICE HOURS:** 8:30 a.m. till 4:30 p.m. Monday through Friday.

   Our office is closed on weekends so it is important to make sure any medication refills are called to us during our regular office hours.

   Also, our emergency telephone number for after hours is (813) 974-2201. Please remember these calls will be responded to by one of our gastroenterology residents who will in turn contact the appropriate attending physician on call.

2. **BILLING:** Individuals who may have any problems with their accounts should contact the Patient Relations Department of the University of South Florida Medical Clinics at (813) 974-3573 between the hours of 10:00 a.m. till 4:00 p.m. Monday through Friday.

3. **DILATIONS:** For our patients who receive periodic esophageal dilations: Please try to anticipate and contact our office at least 2 to 3 weeks in advance of your need for dilation if at all possible. We have been having to schedule routine cases 2 to 3 and sometimes 4 weeks in advance due to our heavy patient load. We do not want any of you to suffer unnecessarily, so please help us with your appointment needs.

4. **Medicare Provider Numbers:** Referring Physicians - With the recent changes brought about by Medicare, we will need your Medicare Provider Number when new Medicare patients are referred to the Center. We will appreciate office personnel of referring physicians making this number available to us.

animal "model" we are currently using is the North American opossum. Often referred to as an urban pest and nocturnal visitor to the neighborhood garbage cans, the opossum is one of the few species whose esophagus is similar to humans in composition of its muscle fibers. Understanding the normal function of the esophagus provides clues to the many diseases which affect the esophagus and swallowing.

Clinically, our continuing research interests include surveillance of the most effective and safe treatments of stenosis (narrowing) of the esophagus; more accurate diagnosis and staging of cancers of the esophagus and stomach; and improved forms of radiation and thermal therapies for esophageal cancers. Many of these projects are just beginning while others have been in progress for the past several years. This is truly an exciting time in research at the Center. Our ultimate goal is always to provide better understanding, diagnosis, and treatment to our patients at the Center for Swallowing Disorders. In the future, we will highlight some of our interesting and promising research projects in this newsletter.
During the past year, members of the Center for Swallowing Disorders staff have continued their active participation in undergraduate and graduate medical education at regional, national, and international meetings. These presentations on topics related to swallowing disorders require considerable research and time to prepare teaching slides and videotapes. Contributions to the medical literature in journals and textbooks also have been significant.

**Lecture Presentations by CSD Staff**

1. January 9-20, 1989: Visiting Consultant, Venezuela Society of Gastroenterology, Caracas and Maracaibo, Venezuela. 1) Diagnosis and Management of Malignant Esophageal Obstruction. 2) Techniques of Esophageal Dilation. 3) Pathophysiology and Therapy for Achalasia of the Esophagus. 4) Endoscopic Ultrasound for Diagnosis and Staging of Esophageal Tumors. (Boyce)

2. January 24, 1989: H. Lee Moffitt Cancer Center and Research Institute, Tampa, Florida. Care of Patients with Dysphagia. (Sullivan, Chilton, Jones)


8. May 25, 1989: Orlando Regional Medical Center, Orlando, Florida. Endoscopic Ultrasonography. (Boyce)


**Medical Articles:**

- Drug-Induced Injury of the Esophagus and Stomach. Proceedings for the Holland Digestive Disease Week.
- Phorbol Esters Induce Retrograde Myoelectric Activity in Rabbit Ileum In Vivo. American Journal Physiology.
- Effects of Neuropeptide Y (NPY) on Transverse Strips of Opossum Esophageal Body and LES. Gastroenterology.