Dysphagia is best defined clinically as the sensation of delay in passage of a food bolus within 10 seconds of initiation of a swallow. Dysphagia is never psychogenic, i.e. due to nervousness or emotions. It is one of the most specific and easily identifiable symptoms that the clinician will encounter. The medical history, observation of swallowing, and timing the onset of dysphagia sensation after the swallow are exceedingly reliable in the diagnosis of dysphagia and should be accurate in from 80 to 90 percent of instances, as to the mechanism involved, its location, and whether the cause is benign or malignant. If the clinician simply will listen to the patient’s description of the problem and asks the appropriate questions, the diagnosis usually will be apparent.\(^1\)\(^2\)\(^3\)

The three major types of dysphagia may be categorized as transfer, transit, and obstructive. Transfer dysphagia represents a pathological alteration in the neuromotor mechanism of the oropharyngeal phase of swallowing. Transit dysphagia is classically represented by achalasia, as characterized by absent primary and secondary peristalsis (muscle contraction) in the body of the esophagus, and increased pressure with incomplete relaxation of the lower esophageal sphincter (valve). Obstructive dysphagia is caused by mechanical narrowing or stenosis in the pharynx, esophagus, or at the esophagogastric junction.

Obstructive Dysphagia

The patient with lumen obstruction may be taught the “tricks of the trade” in order to maintain reasonable good nutrition and avoid medical attention by eating only liquid, soft, or finely cut solid food, extending mealtime up to 90 minutes, chewing food for extended periods before swallowing and “washing down” this well-chewed food with copious amounts of liquid. On occasion, complete obstruction by food impaction occurs acutely, not uncommonly during social outings or restaurant meal. Most such instances of acute obstruction are related to benign esophageal stenosis. Patients with esophageal stenosis nearly always will have difficulty in swallowing at least one of the following foods: meat, especially beef that has been charcoal grilled, apples, or fresh bread. The patient usually prefers chicken or fish, has avoided charcoal steak for quite some time, has learned to toast bread so that it will crumble and to remove the peel from apples to reduce the dysphagia.

Mechanical obstruction typically causes difficulty first with solids of large bolus size and subsequently many progress to the point of difficulty swallowing even clear liquids or saliva. Some individuals have stable degrees of stenosis, never develop progressive dysphagia, and only under specific circumstances of an esophageal bolus challenge, usually related to carelessness or inebriation, have repeated transient episodes of dysphagia that never force them to seek medical therapy. When progressive inflammation or tumor growth accounts for the stenosis, the patient develops progressive dysphagia over a period of weeks to months. Benign strictures progress rather slowly, rarely are associated with significant weight loss, often are the result of reflux esophagitis, and are nearly always treated adequately by esophageal dilation. Malignant strictures on the other hand, typically are progressive once dysphagia appears and are associated in nearly every instance with a history of weight loss before the patient seeks medical attention.

Neuromotor Disorders

The patient with a neuromotor disorder affecting the pharynx and hypopharynx typically presents with a history of first having dysphagia with liquids while solids pass without significant difficulty. Cough related to liquid aspiration and nasal regurgitation often are associated. The most common cause of this particular syndrome is cerebral vascular disease that results in a stroke; other disorders such as bulbar polio, myasthenia gravis, polymyositis and botulism all may manifest transfer dysphagia as the major symptom.

Patients with achalasia (nerve and muscle dysfunction) typically have dysphagia for both liquids and solids appearing simultaneously, as the first clinical evidence of this disorder. Achalasia occurs at both extremes of age, but most patients will be between their third and sixth decade at the time of diagnosis, often having dysphagia for many years before the patient seeks medical attention.

Diagnostic Techniques

Pharyngo-Esophageal Manometry

Disorders that cause transfer or transit types of dysphagia are best defined by careful study of motility patterns. The most common dysphagia-producing disorders of neuromotor etiology are those related to strokes, achalasia and scle-
roderma. A properly performed manometric study and/or a dynamic video fluoroscopy using barium contrast will clearly define the motor dysfunction in most cases.

**Barium Contrast Studies**

It is important to recognize the esophageal examination by either liquid barium or endoscopy is not sufficient to diagnose esophageal obstruction in all cases. Both of these methods of objective evaluation may miss significant degrees of esophageal stenosis unless the examiner is particularly cautious and objective in his examination.

It is somewhat illogical for the patient with solid food dysphagia to be examined only with liquid barium. The patient clearly tells us in the history that liquids have caused no problem but attempts to swallow a solid bolus causes dysphagia. Therefore, in cases where an esophagram using liquid barium does not clearly define the cause of dysphagia, a bolus challenge study must be conducted using a 12.5 mm barium tablet and in some cases, a marshmallow.

**Video Endoscopy**

Video esophagoscopy is indicated early in the evaluation of every patient with dysphagia because of the need to precisely define the presence of any obstructing lesion and to detect any associated condition that may influence a therapeutic decision. Endoscopy permits biopsy and cytology under direct vision and is highly accurate for diagnosis of obstructing lesions.

When a tight stricture is found and endoscopy beyond this level is impossible, a repeat examination is indicated after peroral dilation. Strictures often are associated with the premalignant condition of a columnar-lined (Barrett) esophagus and biopsy beyond the stricture will confirm the diagnosis.

Although esophagoscopy is of little value in diagnosis of neuromotor disorders it is indicated to evaluate for associated pathology.

**Therapy for Dysphagia**

Most patients with obstructive dysphagia suffer from benign strictures or inflammatory stenosis due to gastroesophageal reflux. In some cases severe reflux esophagitis without stricture causes dysphagia and endoscopy can confirm the indication for drug treatment rather than dilation. There are many other etiologies such as cancer, drug-induced esophagitis, esophageal rings, congenital strictures, cervical webs, and achalasia that must be defined by complete clinical and endoscopic evaluation before proper therapy is prescribed. Medical therapy for acid reflux disease and/or peroral dilation generally provide good relief for the benign conditions.

References:


**Alcohol and Smoking As Determinants of Dyspeptic Symptoms**

Alcohol and smoking are widely recognized as factors leading to dyspeptic symptoms, such as belching, regurgitation and stomach or chest pains. To more closely examine the relationship between drinking/smoking and dyspepsia, Drs. Rajeev Vasudeva and colleagues from the University of South Carolina School of Medicine, the Southern Illinois School of Medicine and the University of Toronto collaborated to study 702 subjects with a wide spectrum of drinking habits.

To begin the study, participants were evaluated by a comprehensive battery of tests, during a secondary prevention program for excessive drinking. Each subject underwent a standardized history and physical examination that focused...
in detail on drinking and smoking habits, and the presence of
dyspeptic symptoms, including frequent heartburn, difficulty
swallowing, and regurgitation of food and acid.

The results of the study were presented at the recent
meeting of the American College of Gastroenterology. They
found a significant correlation between dyspeptic symptoms
and both duration of smoking and greater daily cigarette
consumption. They found an even greater association
between alcohol consumption and dyspeptic symptoms.
The data from this study indicate the need for an additional
one to show whether or not cessation of smoking and/or
drinking would decrease dyspeptic symptoms, as common
sense would suggest. In the meantime, emphasis on reduc-
tion or elimination of drinking and smoking should be a part
of any physician’s therapeutic intervention in such patients.

From The Director

An Update on
Center for Swallowing Disorders
Consultation Services
For Our Medical Colleagues and Patients

During the past two years, the Center for Swallowing
Disorders has experienced a remarkable increase in referral
of patients with all types of difficult swallowing problems. We
have responded with appointments in the most timely fashion
possible. Even so, our present waiting time to appointment
for a routine patient referral averages approximately four (4)
weeks. In an effort to control and reduce the waiting period
for an appointment, our staff has carefully considered the
options. Our primary concern is to provide the highest
quality care, including the most effective diagnosis and
treatment possible. In order to provide quality care in a
timely manner, it has become necessary to restrict the
number of different conditions or problems that we accept
for consultation until our physician and support staff can be
enlarged.

We have elected to limit the disorders that we can accept
for evaluation and treatment to the following:

1. **Esophageal strictures of all causes** with priority given
to those that are severe and unresponsive to prior
therapy.

2. Diagnosis and treatment of esophageal cancer.

3. Achalasia - diagnosis and pneumatic dilation.

4. Barrett esophagus for surveillance and management of
complications.

5. Endoscopic ultrasonography for cancer staging and
evaluation of submucosal lesions.

To date, we have evaluated over 1500 patients from 21
states and 4 foreign countries. Many hours are required each
week to coordinate all of the necessary details involved in
preparing for a consultation visit. As many as 30 to 40
telephone calls per day are received from, or placed to,
physicians and patients to finalize appointment arrange-
ments or to report results of our evaluation. The availability
of prior medical (history and physical) records, x-ray studies
and other tests is essential to properly complete our evalua-
tion and therapy. Patients who require hotel accommoda-
tions and other assistance are provided the necessary
information.

I am hopeful that this update on limitation of our consultation
services will provide a better understanding of the import-
tance of these changes to the responsiveness and efficiency
of our operation.

If we are able to add additional physicians and support per-
sonnel in the future, we will be able to expand our consulta-
tion services to include a wider range of swallowing disorders.

Sincerely,

H. Worth Boyce, Jr., M.D.
Director, Center for Swallowing Disorders
During the past six months, members of the Center for Swallowing Disorders staff have continued their active participation in 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. **February 5 - 7, 1993:** ASGE Tenth Interim Postgraduate Course, LaJolla, CA. Laparoscopy: Will the Gastroenterologist be Left Behind?

2. **March 15-17, 1993:** Lloyd Nolan Hospital’s Internal Medicine Seminar, Orlando, FL. (1) Diagnosis and Treatment of Dysphagia, (2) Diagnosis of Esophageal Disorders and (3) Symptoms, Signs and Syndromes of Gastroesophageal Reflux


4. **June 14, 1993:** American Society of Clinical Pathology Postgraduate Course, Portland, ME. Endoscopic Diagnosis of Gastrointestinal Pathology.

5. **June 16, 1993:** University of Minnesota Postgraduate Course, Minneapolis, MN. (1) Palliation of Malignant Esophageal Obstruction; (2) Management of Complex Esophageal Strictures.

**Contributions To Medical Literature**


