WORLD SKULL BASE
E-LEARNING MATERIAL

Swallowing Disorders

Dysphagia

Dysphagia

ICD-10	R13 [1]
ICD-9	438.82 [2], 787.2 [3]
DiseasesDB	17942 [4]
MedlinePlus	003115 [5]
eMedicine	pmr/194 [6]
MeSH	D003680 [7]

Dysphagia is the medical term for the symptom of difficulty in swallowing.[][][] Although classified under "symptoms and signs" in ICD-10,[] the term is sometimes used as a condition in its own right.[][][] Sufferers are sometimes unaware of their dysphagia.[][]

It is derived from the Greek *dys* meaning bad or disordered, and *phago* meaning "eat". It may be a sensation that suggests difficulty in the passage of solids or liquids from the mouth to the stomach,[] a lack of pharyngeal sensation, or various other inadequacies of the swallowing mechanism. Dysphagia is distinguished from other symptoms including odynophagia, which is defined as painful swallowing,[] and globus, which is the sensation of a lump in the throat. A psychogenic dysphagia is known as phagophobia.

Individuals who suffer from dysphagia are often ordered onto thickened fluids. The thicker consistency makes it less likely that an individual with dysphagia will aspirate while they are drinking. Individuals with difficulty swallowing may find liquids cause coughing, spluttering or even choking and thickening drinks enables them to swallow safely. A range of commercial thickening agents are available to purchase for the dietary management of dysphagia.

It is also worthwhile to refer to the physiology of swallowing in understanding dysphagia.

Causes

Classification

Dysphagia is classified into three major types:

1. Oropharyngeal dysphagia and
2. Esophageal dysphagia.[]
3. Functional dysphagia is defined in some patients as having no organic cause for dysphagia that can be found.

Following table enumerates possible causes of dysphagia:

Location	Cause
Oral dysphagia	• Tonsillitis • Peritonsillar abscess • Stomatitis • Tongue cancer • Paralysis of soft palate, usually due to diphtheria in children and bulbar palsy in adults • Bell's palsy • Xerostomia

Pharyngeal dysphagia	• Lumen:
	  • Impacted foreign body
	• Wall:
	  • Pharyngitis
	  • Paterson-Kelly syndrome
	  • Pharyngeal spasms
	  • Malignant neoplasm
	• Outside the wall:
	  • Retropharyngeal abscess
	  • Lymphadenopathy of cervical lymph nodes
	  • Thyroid malignancy

Esophageal dysphagia	• Lumen
	  • Impacted foreign body
	• Wall:
	  • Esophageal atresia
	  • Benign strictures, due to reflux esophagitis, swallowed corrosives, tuberculosis, scleroderma, and radiotherapy, systemic sclerosis
	  • Spasms, due to achalasia, Paterson-Kelly syndrome, esophageal webs, and esophageal rings
	  • Neoplasms, such as, esophageal leimomyoma
	  • Nervous disorders, such as, bulbar palsy, pseudobulbar palsy, post-vagotomy, myasthenia gravis
	  • Crohn's disease
	  • Candida esophagitis
	• Outside the wall:
	  • Retrosternal goitre
	  • Malignancy
	  • Thyroid swelling
	  • Zenker's diverticulum
	  • Aortic aneurysm
	  • Mediastinal growth
	  • Dysphagia lusoria
	  • Periesophagitis
	  • Hiatus hernia
	  • Tight hiatus repairs

Signs and symptoms

Some patients have limited awareness of their dysphagia, so lack of the symptom does not exclude an underlying disease.[] When dysphagia goes undiagnosed or untreated, patients are at a high risk of pulmonary aspiration and subsequent aspiration pneumonia secondary to food or liquids going the wrong way into the lungs. Some people present with "silent aspiration" and do not cough or show outward signs of aspiration. Undiagnosed dysphagia can also result in dehydration, malnutrition, and renal failure.

Some signs and symptoms of oropharyngeal dysphagia include difficulty controlling food in the mouth, inability to control food or saliva in the mouth, difficulty initiating a swallow, coughing, choking, frequent pneumonia,

unexplained weight loss, gurgly or wet voice after swallowing, nasal regurgitation, and dysphagia (patient complaint of swallowing difficulty).[] When asked where the food is getting stuck, patients will often point to the cervical (neck) region as the site of the obstruction. The actual site of obstruction is always at or below the level at which the level of obstruction is perceived.

The most common symptom of esophageal dysphagia is the inability to swallow solid food, which the patient will describe as 'becoming stuck' or 'held up' before it either passes into the stomach or is regurgitated.

Pain on swallowing or odynophagia is a distinctive symptom that can be highly indicative of carcinoma, although it also has numerous other causes that are not related to cancer.

Achalasia is a major exception to usual pattern of dysphagia in that swallowing of fluid tends to cause more difficulty than swallowing solids. In achalasia, there is idiopathic destruction of parasympathetic ganglia of the auerbach submucosal plexus of the entire esophagus, which results in functional narrowing of the lower esophagus, and peristaltic failure throughout its length.

Dehydration and or undernutrition caused by restrictions may result in weight loss and worsen the risk of aspiration pneumonia.

Differential diagnosis

All causes of dysphagia are considered as differential diagnoses. Some common ones are:

- Esophageal atresia
- Paterson-Kelly syndrome
- Zenker's diverticulum
- Benign strictures
- Achalasia
- Esophagial diverticula
- Scleroderma
- Diffuse esophageal spasm
- Webs and rings
- Esophageal cancer
- Eosinophilic esophagitis
- Hiatus hernia, especially paraesophageal type
- Dysphagia lusoria
- Gastroesophageal reflux

Esophageal dysphagia is almost always caused by disease in or adjacent to the esophagus but occasionally the lesion is in the pharynx or stomach. In many of the pathological conditions causing dysphagia, the lumen becomes progressively narrowed and indistensible. Initially only fibrous solids cause difficulty but later the problem can extend to all solids and later even to liquids. Patients with difficulty swallowing may benefit from thickened fluids if the person is more comfortable with those liquids, although, so far, there are no scientific study that proves that those thickened liquids are beneficial.

Diagnostic approach

The gold-standard for diagnosing oropharyngeal dysphagia in countries of the Commonwealth are via a modified barium swallow study or videofluoroscopic swallow study (fluoroscopy). This is a lateral video (and AP in some cases) X-ray that provides objective information on bolus transport, safest consistency of bolus (different consistencies including honey, nectar, thin, pudding, puree, regular), and possible head positioning and/or maneuvers that may facilitate swallow function depending on each individual's anatomy and physiology. In Zenker's diverticulum, barium meal first fills the pouch, then overflows from top. In achalasia, it shows "bird-beak" tapering

of distal esophagus. In esophageal cancer, it shows a characteristic filling defect ("Rat-tail" deformity). In leiomyoma, there is smooth filling defect. Reflux can be demonstrated in fluorscopy. In strictures, meal is initially arrested above stricture, then gradually trickles down.

Esophagoscopy and laryngoscopy can give direct view of lumens.

Chest radiograph may show air-fluid level in mediastinum. Pott's disease and calcified aneurysms of aorta can be easily diagnosed.

Esophageal motility study is useful in cases of achalasia and diffuse esophageal spasms.

Exfoliative cytology can be performed on esophageal lavage obtained by esophagoscopy. It can detect malignant cells in early stage.

Ultrasonography and CT scan are not very useful in finding cause of dysphagia; but can detect masses in mediastinum and aortic aneurysms.

A FEES (Fibreoptic endoscopic evaluation of swallowing), sometimes with sensory evaluation, is done usually by a Medical Speech Pathologist or Deglutologist. This procedure involves the patient eating different consistencies as above and further the results are analyzed.

Epidemiology

Swallowing disorders can occur in all age groups, resulting from congenital abnormalities, structural damage, and/or medical conditions.[] Swallowing problems are a common complaint among older individuals, and the incidence of dysphagia is higher in the elderly,[] in patients who have had strokes,[] and in patients who are admitted to acute care hospitals or chronic care facilities. Dysphagia is a symptom of many different causes, which can usually be elicited through a careful history by the treating physician. A formal oropharyngeal dysphagia evaluation is performed by a Medical speech pathologist.[]

References

[1] http://apps.who.int/classifications/icd10/browse/2010/en#/R13
[2] http://www.icd9data.com/getICD9Code.ashx?icd9=438.82
[3] http://www.icd9data.com/getICD9Code.ashx?icd9=787.2
[4] http://www.diseasesdatabase.com/ddb17942.htm
[5] http://www.nlm.nih.gov/medlineplus/ency/article/003115.htm
[6] http://www.emedicine.com/pmr/topic194.htm
[7] http://www.nlm.nih.gov/cgi/mesh/2009/MB_cgi?field=uid&term=D003680

External links

- World's First Liquid Thickener - Precise Thick-N (http://www.precisethickn.com.au)
- Dysphagia (http://www.dmoz.org/Health/Conditions_and_Diseases/Digestive_Disorders/Oral/Dysphagia//) at the Open Directory Project
- Overview of Feeding Problems in Children (http://www.childrenandbabiesnoteating.com)
- Dysphagia Guideline (http://www.worldgastroenterology.org/dysphagia.html) at the World Gastroenterology Organisation (WGO)
- Speech Language Pathology Scope of Practice (http://www.asha.org/docs/html/SP2007-00283.html)
- American Speech-Language-Hearing Association (http://www.asha.org/default.htm)
- Swallowing and Feeding (http://www.asha.org/public/speech/swallowing/)
- Dysphagia - Swallowing problems after stroke (http://www.dysphagia.org.uk/)

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