DYSPHAGIA

Definition

- Dysphagia is defined as having difficulty in swallowing which may affect any part of the swallowing pathway from the mouth to the stomach.
- Approximately half of the dysphagia patients are seen in ENT clinics.

History and Examination

- Patients complain that foods or liquids are no longer being swallowed easily and there is a sensation of food sticking.
- Clinician must try to distinguish oropharyngeal from oesophageal dysphagia

Oropharyngeal vs.Oesophageal Dysphagia

- In Oropharyngeal dysphagia, there is difficulty in preparing and transporting the food bolus through the oral cavity as well as initiating the swallow. This may be associated with aspiration or nasopharyngeal regurgitation.
- In Oesophageal dysphagia, patients complain of food sticking in their lower throat, neck, retro-sternal discomfort or epigastrium.

Age: Possible causes

- **Children** : Foreign body or congenital malformation
- **Middle aged patients**: Reflux oesophagitis, hiatus hernia, anaemia, achlasia, globus syndrome.
- **Elderly patients**: Malignancy, stricture formation from longstanding reflux, pharyngeal pouch, motility disorders associated with aging and neurological disorders.

History

- Onset.
- Duration
- Progression
- Severity of symptoms
- Types of food intake that causes problems
- Alleviating factors

Associated Symptoms

- Regurgitation
- Pain on swallowing
- Hoarseness of voice
- Otalgia
- Coughing after eating
- Frequent chest infections

Clinical Examination

- Complete Head and neck examination
  - Inspection of oral cavity
  - Dentition
  - Oropharynx
  - IDL
  - Nasolaryngoscopy
  - Cranial nerve examination (tongue, gag and cough reflex, hoarseness, vocal cord mobility)
  - Neck for lymph nodes, neck masses, thyroid enlargement, loss of laryngeal crepitus and integrity of laryngeal cartilages.

Special Investigations

- Blood tests to exclude anaemia (? Cause or effect)
- ESR or C-Reactive Protein raised in malignancy or chronic inflammatory process
- LFT, RFT along with S. Calcium when nutrition is impaired or metastasis is suspected
- Thyroid function tests if dysphagia is caused by goiter or malignancy of thyroid

Special Investigations

- Barium swallow
- Chest radiograph
- CT scan examination of neck, chest and abdomen.
- MRI is indicated when there are neurological causes such as multiple sclerosis, cerebral tx, nasopharyngeal ca.
- Rigid endoscopy
- Flexible endoscopy
- Manometry

Causes: Congenital

- Choanal Atresia
- Cleft lip and palate
- Unilateral vocal cord paralysis
- Laryngeal cleft
- Tracheo-oesphageal fistula
- Oesophageal atresia
- Vascular rings

Acquired: Traumatic

- Accidental and iatrogenic
- Blunt trauma, penetrating injuries and compression effects
- Direct damage and injury to cranial nerves
- Head injury

Acquired: Infections

- Acute pharyngitis, tonsillitis, quinsy
- Glandular fever
- Acute supraglottitis
- Herpetic, fungal and CMV mucosal lesions
- Candidiasis
- Tuberculosis
- Submandibular, parapharyngeal and retropharyngeal abscesses

Acquired: Inflammatory

- GERD with or without stricture formation
- Patterson Brown-Kelly syndrome
- Autoimmune disorders like scleroderma, Sjogrens disease, rheumatoid arthritis

Acquired: Oesophageal motility disorders

- Achlasia
- Diffuse oesophageal spasm
- Nutcracker oesophagus

Acquired: Neoplastic

- Benign and malignant tumors of oral cavity, pharynx and oesophagus
- Nasopharyngeal Carcinoma
- Skull base tumors
- Leukemia and lymphomas
- Enlarged mediastinal lymph nodes

Acquired: Neurological

- CVA (Stroke)
- Isolated recurrent laryngeal nerve palsy
- Parkinson's disease
- Myasthenia gravis
- Multiple sclerosis
- Motor- neuron disease

Acquired: Drug Induced

- Drugs causing oesophagitis
- Swallowing tablets with insufficient water or just before going to bed can cause oesophagitis
- Oesophagus at the level of aortic arch most vulnerable to contact by acid producing drugs (with pH less than 3) such as tetracyclines, doxycycline, vitamin C and ferrous sulphate

Acquired: Drug Induced (2)

- Broad-spectrum antibiotics and chemotherapeutic agents may cause secondary viral ulceration or fungal infections
- Stevens-Johnson syndrome is a more serious complications of antibiotic therapy with an acute erosive pharyngitis/ oesophagitis as well as delayed oesophageal strictures
- Inhibitory drug side effects by anticholinergics, tricyclic antidepressants and calcium channel blockers

Acquired: Drug Induced (3)

- Excitatory side effects of drugs like cisapride and metaclopramide.
- Dysphagia can be a complication of drugs like antihypertensives, ACE Inhibitors, anticholinergics, antiemetics, antihistamines, diuretics, and opiates by causing xerostomia

Miscellaneous

- Presbydysphagia
- Foreign bodies
- Caustic strictures
- Pharyngeal pouch
- Patients with tracheostomy

Key Points

- Age suggests most likely cause of dysphagia
- Globus pharyngeus rarely associated with any serious disease
- Dysphagia of short duration in elderly patient who smoke or drink and which progress from solids to liquids is a classic case of malignancy
- Referred otalgia with dysphagia is a sinister symptom and poor prognostic sign

Key Points (2)

- Neurological causes of dysphagia mostly affect orpharyngeal phase
- Ingested foreign bodies tend to lodge at sites of constriction
- Barium study is contraindicated in patients with suspected perforation of oesophagus

Motility Disorders

- These conditions include:
  - **Achlasia**
  - **Scleroderma**
  - **Diffuse Esophageal Spasm**
  - **Nutcracker Esophagus**
- Up to 30% pts with diagnosis of MI will be found to have an esophageal cause of pain and motility disorders account for over 50% of these patients.
- Mainstay of investigation is manometry , endoscopy, barium studies

Achlasia

- Failure of relaxation of LES during swallowing due to degeneration of myenteric plexus.
- Presentation long standing dysphagia and regurgitation
- Barium swallow: Dilated esophagus with a smooth tapering stricture at its lower end
- Esophageal manometry: Synchronous contractions and failure to relax
- 24 Hour pH measurement: Confirms reflux

Achlasia-Treatment

- **Sequential dilatation** of Lower Oesophageal Sphincter with intraluminal balloons under fluoroscopic control
- **Balloon myotomy** is safe, effective in 3/4th cases and can be repeated
- **Surgical myotomy** (Open/laparoscopic) reserved for failed balloon failures
- Failed myotomy can be treated with balloon dilatation

DES & Nutcracker Esophagus

- Characterized by **severe chest pain** and **dysphagia**
- Primarily involvement of lower 1/3, muscle hypertrophy and high pressure contractions
- Symptoms intermittent so ambulatory manometry is required
- Treat with calcium channel blockers or balloon dilatation
- Results disappointing

Esophageal Carcinoma

- EC is increasing in faster in incidence than any other malignancy in developed world with a ten fold rise in the last 20 years
- This increase is not squamous cell carcinoma but in the incidence of adenocarcinoma
- Classification of AC
  - Type 1: Lower 1/3 of esophagus
  - Type 2: At oesophago-gastric junction
  - Type 3: In gastric cardia with 5cm of GE Junction
- Related to damaging effects of GE Reflux.
  - H pylori eradication distal vs. proximal disease

Risk factors

- Older age
- Caucasian race
- Male gender
- GERD symptoms
- Obesity Tobacco use
- Lower esophageal sphincter–relaxing drugs

Protective factors

- Aspirin
- NSAIDs
- *? Helicobacter pylori*
- Dietary factors (fruits, vegetables, fiber)

Barrett's esophagus

- A well-recognized pre malignant condition for the development of adenocarcinoma and results from chronic gastroesophageal reflux.
- It is characterized by a metaplastic transformation of the typically squamous epithelium native of the esophagus, to a columnar type highlighted by the presence of goblet cells appreciated on histologic evaluation.
- The condition entails a 30- to 50-fold greater risk of developing adenocarcinoma.

Treatment

- Early esophageal cancers, those confined to the mucosa or upper submucosa of the esophagus, are termed T1, N0, M0. The traditional approach for these early cancers is surgical resection.
- Primary surgical therapy for cancers limited to the esophagus, stage I or IIa disease, has had good results without the need for or morbidity of chemotherapy
- More than 50% of those with this cancer present with stage III or IV disease. The prognosis remains dismal, with an overall 5-year survival of approximately 20%
- More promising have been the results of studies combining neo adjuvant chemotherapy with radiation therapy.

Palliative Measures

- Despite advances in diagnosis and treatment, up to 50% of patients have incurable disease at presentation, therefore necessitating palliative measure
- A variety of therapies have been employed to palliate dysphagia in patients with oesophageal carcinoma including **oesophageal dilation, radiation therapy, Nd:YAG laser, thermal electrocoagulation, and sclerotherapy of the tumor.**

Palliative Measures

- **Oesophageal prostheses (stents)** have also been used as a method for palliation of malignant dysphagia . Because of improved design, materials, and deployment systems, **self-expandable metal stents** (SEMS) have become an attractive alternative to palliate EAC.

Suggested Further Reading

Scott Browns Otorhinolaryngology, Head and Neck Surgery, 7th Edition, Volume 2

Chapter: Causes of Dysphagia

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