

## THE CLINICAL APPROACH

### HISTORY

The first thing to do when a patient describes difficulty with swallowing is establish exactly what they mean. Does he or she have difficulty initiating swallowing, or is there a sensation of food sticking between the mouth and stomach?

Difficulty initiating a swallow suggests a psychological or neurological cause. If related to anxiety (globus sensation) there may be other associated features: the patient is often young and describes the feeling of a lump in the throat, and the problem may be long-standing but intermittent. With a neurological cause there may have been a sudden onset with dysphasia, or peripheral neurological deficit when caused by a stroke (Fig. 1) or more progressive difficulties such as those associated with Parkinson's disease, motor neurone disease or myasthenia gravis.

When there is a feeling of food lodging within the oesophagus, progression should be determined: fluids are easiest to swallow whilst meat and bread are the most difficult solids. Long-standing previous reflux symptoms may suggest the development of a peptic stricture, but this has become much less frequent with the advent of effective acid suppression therapy (H<sub>2</sub> receptor antagonists and more recently proton pump inhibitors). Progressive dysphagia is more frequently caused by oesophageal cancer. This is usually found in the older age group, is relentlessly progressive and invariably associated with weight loss. Less common oesophageal causes include achalasia, oesophageal webs, oesophagitis, systemic sclerosis and external compression of the oesophagus by bronchial tumour, lymph nodes, aortic aneurysms and an enlarged left atrium (Table 1).

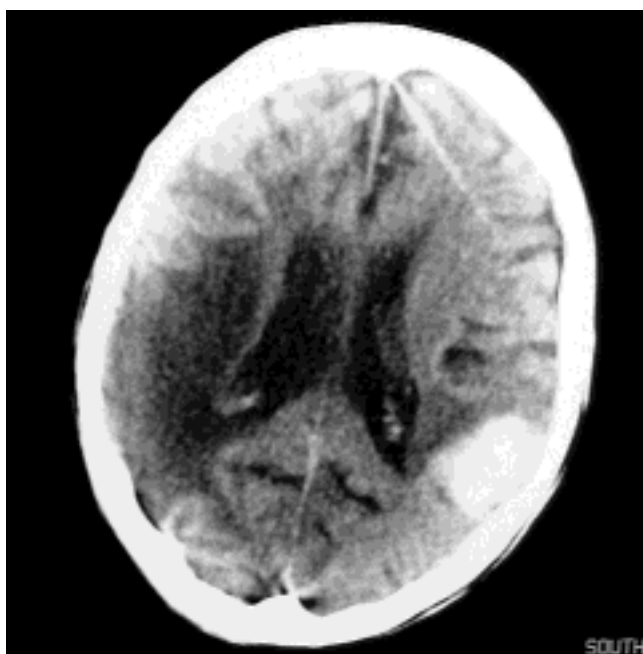


Fig. 1 CT scan brain with haemorrhagic infarct shows as a white area in the cortex.



Fig. 2 Oral telangiectasia.

### EXAMINATION

Evidence of metastatic spread from oesophageal cancers, with lymph-adenopathy in the supraclavicular fossa, should be sought. Neurological complexes associated with stroke, motor neurone disease, myasthenia gravis and Parkinson's disease should be examined for and are usually clinically obvious if advanced enough to cause swallowing difficulty. Calcinosis, telangiectasia and Raynaud's disease with systemic sclerosis indicate the CREST syndrome which is rare but frequently complicated by dysphagia (Figs 2 and 3).

### INVESTIGATION

It should be obvious at the end of the history and examination whether neurological investigation should be the first step (Fig. 4). Radiology of the upper GI tract is much less frequently per-

Table 1 Causes of dysphagia

Causes	Clinical features
<b>Common</b>	
Carcinoma of the oesophagus	Progressive, weight loss, elderly
Peptic stricture	Previous reflux symptoms, bolus impaction
Oesophagitis	Reflux symptoms
Bulbar/pseudobulbar palsy (previous CVA)	Sudden onset, dysphasia and hemiparesis
<b>Less common</b>	
Achalasia	Non-acidic regurgitation, 'normal' OGD
Cricopharyngeal dysfunction	Elderly, frail, difficulty initiating swallow
External compression	Bronchial carcinoma, pharyngeal pouch, mediastinal lymph nodes, cervical spine osteophytes, aortic aneurysms
Globus sensation	Sensation of lump in throat, with difficulty initiating swallow
Diffuse oesophageal spasm	Uncoordinated, non-propulsive peristalsis
Schatzki ring	Small, distal, benign oesophageal web, bolus impaction
Postcricoid web	Iron deficiency, web, glossitis and koilonychia (Plummer-Vinson syndrome)
Systemic sclerosis (CREST)	Calcinosis in the skin, Raynaud's phenomenon, oesophageal dysfunction, sclerodactyly and telangiectasia
Decreased saliva	Drugs (anticholinergics)
Parkinson's disease	Tremor, bradykinesia and rigidity
Motor neurone disease	Muscle weakness, wasting and fasciculation
Polymyositis	Generalised progressive muscle wasting
Chagas, disease	Ganglion cell destruction by <i>Trypanosoma cruzi</i> , endemic in South America; resembles achalasia



Fig. 3 Calcinosis.

formed now, but barium swallow is an important investigation for a patient with dysphagia and may be done prior to endoscopy. It has the advantage that it can reveal pharyngeal pouches (Fig. 5), achalasia, and suggest external oesophageal compression which endoscopy does less well (Fig. 6). Endoscopy allows visualisation of oesophagitis, biopsy sampling of lesions and therapy, and will usually be required following barium swallow. If endoscopy is performed first and no cause for dysphagia is found, barium swallow should follow.

Oesophageal manometry is becoming more widely available

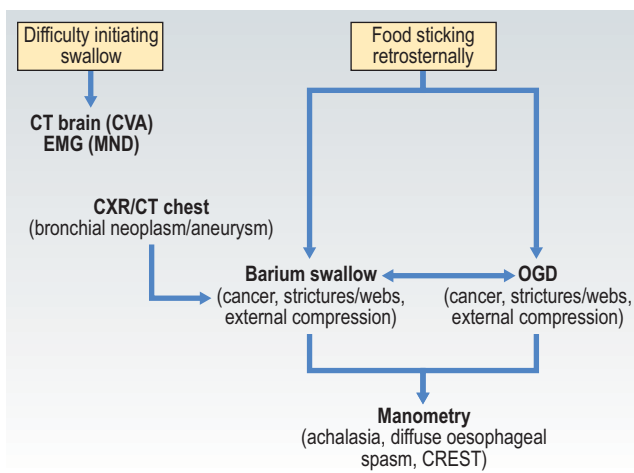


Fig. 4 Investigative algorithm for dysphagia.

### The clinical approach

- Progressive dysphagia in the elderly is most frequently due to oesophageal cancer and investigation is mandatory.
- Neurological causes of dysphagia usually have obvious associated clinical signs at presentation.
- Upper GI endoscopy is probably the most useful first investigation although a barium swallow examination may be required also.
- Manometry can help confirm a diagnosis of achalasia and demonstrate oesophageal dysfunction in diffuse oesophageal spasm or systemic sclerosis.

and easier to perform and analyse with solid state technology and computerisation. It can be particularly helpful in investigating patients with achalasia, CREST syndrome and the other motor disorders of the oesophagus. It should not be performed in isolation but rather as an adjunct to endoscopy or radiology.



Fig. 5 Pharyngeal pouch.



Fig. 6 External compression of oesophagus.

## CANCER OF THE OESOPHAGUS

### RELEVANT ANATOMY

The mucosa of the oesophagus is non-keratinised stratified squamous epithelium for the majority of its length and changes to gastric mucosa at the gastro-oesophageal junction. This is readily visible at endoscopy as a change from white to pink mucosa, and is approximately 40cm from the incisor teeth (z-line or ora serrata) (Fig. 1). It follows a path in the chest behind the trachea and has the aorta wrapping round it. The close proximity to these structures means that external compression of the oesophagus can readily occur.

### PATHOLOGY

Ninety-five per cent of oesophageal cancers arise from either squamous or intestinal mucosa leading to squamous cell carcinoma (SCC) or adenocarcinoma (AC) (Fig. 2). Overall, they represent 2% of all cancers and have an annual incidence of approximately 9:100 000. There has been a striking increase in the incidence of adenocarcinoma over the last 20 years, and now it represents 50% of all oesophageal carcinomas.

SCC shows wide geographic variation in its incidence, with areas of China recording 700:100 000 annual incidence compared to 4:100 000 in the USA. This wide variation is not well understood but may relate to higher dietary intake of nitrosamines in China. Other risk factors include high alcohol consumption, particularly spirits, and tobacco usage. Achalasia, chronic peptic stricture, tylosis (rare autosomal dominant condition with hyperkeratosis of hands and soles) and Plummer–Vinson syndrome predispose to SCC.

The rise in incidence of AC may reflect an increase in Barrett's oesophagus (see pp 000–000) which carries an increased risk of up to 40% compared to the normal population. As gastric mucosa is confined normally to the distal oesophagus, it is not surprising that 80% of ACs occur in the distal oesophagus and may be difficult to distinguish from AC arising in the cardia of the stomach. AC is more frequent in men (5:1) and is less closely associated with smoking, alcohol and achalasia than SCC.

### DIAGNOSIS

Oesophageal cancer is usually diagnosed late, and two thirds of patients already have meta-static disease. The decision as to whether endoscopy or barium swallow is the first investigation may depend to some extent on their availability, but if radiology suggests a tumour (Fig. 2), endoscopic biopsy will be necessary to confirm the diagnosis and aid planning of treatment.

### MANAGEMENT

As surgical resection is the only curative procedure for oesophageal cancer, it should at least be considered in most patients. Oesophagectomy is a major procedure and often a patient's general physical condition will preclude this. CT of the chest and abdomen is useful for detecting local invasion and metastases in the chest and liver. Endoscopic ultrasound allows assessment of depth of invasion of the oesophageal wall and local

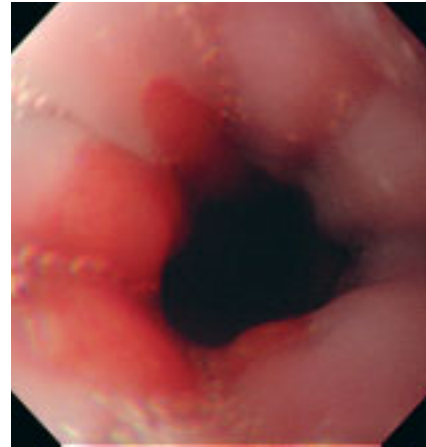


Fig. 1 The normal gastro-oesophageal junction with change from squamous to gastric mucose at the z-line.



Fig. 2 Oesophageal cancer demonstrated by barium swallow.



Fig. 3 Old-fashioned rigid plastic stent for palliation of oesophageal cancer.

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