

## The Oesophagus

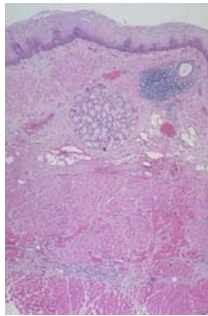
### A muscular tube

- Conduction of food and drink
- Sphincters at top and bottom



### Histology

- Non-keratinising squamous epithelium



### Congenital and mechanical disorders (1)

- Atresia – often with fistula to trachea
- Hiatus hernia (presence of stomach in thoracic cavity) – due to increased intra-abdominal pressure

### ...Mechanical disorders (2)

- Achalasia
  - Failure of relaxation of lower oesophageal sphincter (destruction or degeneration of nerve plexus)
  - Similar features in Chagas' disease (*South American trypanosomiasis*)

### Oesophageal varices

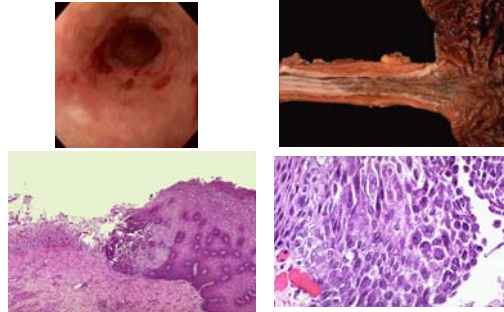
- Localised dilatation of lower oesophageal veins
- Secondary to portal hypertension (portal vein thrombosis or hepatic cirrhosis)
- Haemorrhage can be catastrophic



## Inflammation (oesophagitis)

- Acute infective – Herpes virus, Candida. Both seen most commonly in immunosuppressed.
- Ingestion of corrosives
- Chronic reflux through lower oesophageal sphincter

## Herpes oesophagitis



## Herpes oesophagitis

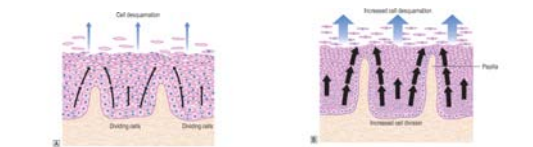
- Punched-out ulcers
- Viral intranuclear inclusions
- Formation of multinucleated giant cells (cytopathic effect)

## Candida oesophagitis

- Haemorrhagic mucosa with white plaques
- Fungal hyphae and yeast forms on microscopy



## Reflux oesophagitis



- Common – often without symptoms
- Mucosa exposed to acid-pepsin and bile
- Increased cell loss and regenerative activity

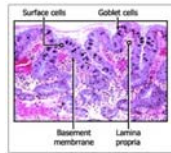
## Consequences of reflux oesophagitis

- Ulceration
- Stricture
- Glandular metaplasia (Barrett's oesophagus)
- Carcinoma



## Barrett's oesophagus

- Columnar epithelial cells in lower oesophagus
- Variable extent
- Presence of goblet cells "intestinal metaplasia" associated with risk of progression to dysplasia/cancer



## Oesophageal neoplasms

- Benign tumours (rare): squamous papilloma, leiomyoma
- Malignant tumours
  - Squamous carcinoma
  - Adenocarcinoma

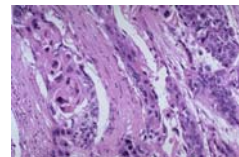
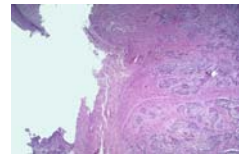
Presenting symptom - dysphagia

## Epidemiology of oesophageal cancer

- Squamous carcinoma commonest worldwide
- Adenocarcinoma has very different risk factors and is now the commonest type in Europe/N.America

## Squamous carcinoma

- High incidence in Southern Africa (incl. Malawi), China, Iran
- Probably diet related (A and B vitamin deficiency, fungal contamination) – tobacco and alcohol also risk factors
- Associated with chronic non-specific oesophagitis



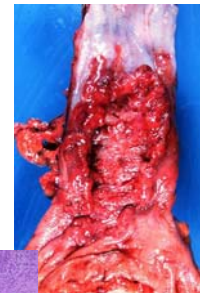
## Squamous carcinoma

- Often large exophytic occluding tumours
- Invasive disease preceded by dysplasia and carcinoma in situ



## Adenocarcinoma

- Occurs in lower oesophagus
- Often associated with Barrett's oesophagus (progresses through dysplasia to cancer)



## Clinical course of oesophageal cancer

- Grim! (even with best available resource)
- Tumours have commonly spread to regional nodes and/or liver at presentation
- No peritoneal lining in mediastinum – local invasion (heart, trachea, aorta) often limits surgery