Digestive System Disorders 1

Lecture 11
Pathology and Clinical Science 1 (BIOC211)
Department of Bioscience

Text Reference:
Session Learning Outcomes

This session aims to understand:

- The normal function of the GIT
- Common diagnostic tests for GIT disorders
- The common clinical features relating to the GIT
- The causation, clinical features, treatment aims and prognosis for the following conditions:
  - Disorders of mouth and neck
  - Disorders of pharynx and oesophagus and duodenum
BE HEARD.

The SES may be waiting in your inbox.
The survey is open from August 3rd to September 5th.
Fill it out for a chance at winning $1000* and help us improve higher education.
The sooner you complete it, the more chances you have to win!

*T&C’s Apply.
DIGESTIVE SYSTEM
DIGESTIVE SYSTEM

DIGESTIVE SYSTEM

## Diagnostic Tests

- **X-rays** - plain and contrast (barium)
- **Ultrasound** - fluid filled lesion eg. cholecystitis, appendicitis, aortic aneurysm
- **CT scan** - thickened bowel walls, mesentery, retro-peritoneal structures and aorta, staging of tumours
- **MRI** - abscesses and fistulas, hepatobiliary and pancreatic disorders
## Diagnostic Tests

- **Endoscopy** - gastroscopy, colonoscopy, sigmoidoscopy, Endoscopic retrograde cholangio-pancreatography (ERCP), Magnetic resonance cholangiopancreatography (MRCP)
- **Stool Cultures**
- **Radio isotope tests**, **Urea breath Test**, **leukocyte labeling**
- **Blood and serology tests**
Diagnostic Tests

www.medicine.cu.edu.eg/.../xray/intestine/28.htm

commons.wikimedia.org/wiki/File:Stomach_endos...
Common Clinical Features

| o Dyspepsia / indigestion – collective term for many symptoms |
| o Heartburn (pyrosis), acidity, |
| o Dysphagia |
| o Nausea & Vomiting (bloody - haematemesis) |
| o GIT bleeding |
| o Malabsorption / Malnutrition |
### Common Clinical Features

- **Flatulence** - belching or flatus
- **Diarrhoea** - watery and bloody (melaena)
- **Constipation** - hard difficult to pass
- **Pruritus ani**
- **Abdominal pain** - site, intensity, duration, site and frequency aggravation and relief from, differentiate upper from lower
- **Weight loss** often from anorexia
## Disorders of Mouth and Throat

### Aphthous Ulceration
- 30% population
- Minor = < 10mm
- Major = > 10mm
- Nutritional
  - iron/ B12/ folate deficiency
- Systemic
  - Crohn’s/ UC/ Coeliac/ SLE
  - Immune deficiency
  - Dermatology conditions
  - viral/ drugs/ trauma

### Mouth Lesions
- White patches (candidiasis)
- Leukoplakia (idiopathic white patches)
  - tobacco
  - alcohol
  - pre-malignant
Disorders of Mouth, Throat

Mouth Ulceration

Leukoplakia

Candidiasis

www.drpaulose.com/general/apthous-ulcers-mout...
Oesophageal Symptoms

- Dysphagia - Difficulty Swallowing
- Heartburn / Substernal Discomfort
- Acid Regurgitation
- Odynophagia - Painful Swallowing

http://www.clivir.com/pictures/hb/GERD.jpg
# Gastro Oesophageal Reflux Disorder (GORD)

**Normal anti reflux mechanism lost due to:**

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>loss of Lower oesophageal sphincter (LOS) resting tone</td>
</tr>
<tr>
<td>transient LOS relaxation</td>
</tr>
<tr>
<td>increase in oesophageal mucosa to acid</td>
</tr>
<tr>
<td>delayed oesophageal clearance</td>
</tr>
<tr>
<td>large hiatus hernia</td>
</tr>
<tr>
<td>delayed gastric emptying</td>
</tr>
<tr>
<td>Increased intra-abdominal pressure</td>
</tr>
<tr>
<td>Dietary / environmental factors eg chocolate, coffee</td>
</tr>
</tbody>
</table>
**Clinical Features**
- Heartburn, burning pain
- Regurgitation food and acid
  - aggravated by lying, stooping and bending, hot drinks & alcohol
  - relieved by antacids
- Waterbrash (sour taste)
- Odynophagia, dysphagia

**Diagnosis**
- Barium swallow, oesophagoscopy
- Oesophageal pH monitoring
- Acid suppression trials

Red, inflamed, excoriated oesophagus

Gastro Oesophageal Reflux Disorder

Burning sensation in the chest and throat

Normal Gastro-esophageal sphincter prevents reflux

Gastric reflux causing heartburn

www.drbhandari.com/Patient_Education/GERD.htm
Gastro Oesophagaeal Reflux Disorder

Treatment
- Antacids, alginate antacids,
- Raising head of bed,
- Weight loss, reduction alcohol (OH), smoking
- Drugs - H2 receptor antagonists, proton pump inhibitors, prokinetic agents
- Avoid large meals

Complications
- Oesophagitis
- Barretts oesophagus
- Anaemia
- Strictures
- Oesophageal cancer
Complications of GORD

1. Oesophagitis
2. Barrett’s Oesophagus
3. Oesophageal stricture (endoscopy)
4. Oesophageal stricture (Barium meal)
Barrett's Oesophagus

- Changes to oesophageal cells from oesophageal reflux
- Squamous cell replacement with metaplastic columnar cells
- May progress to oesophageal cancer

www.barrx.com/.../index.cfm/10
Oesophagitis

Aetiology

- GORD
- Candidiasis
- Ingestion corrosives
- Medications eg NSAIDS

http://www.wjgnet.com/1948-5190/full/v2/i7/WJGE-2-252-g003.jpg
Hiatus Hernia

Protrusion of part of stomach through diaphragm opening into thoracic cavity

○ **Types**
  - Sliding hernia - stomach and gastro-oesophageal junction move upward (most Common)
  - Rolling or para-oesophageal hernia - part of fundus of stomach moves upward

○ **Cause**
  - Short oesophagus, weak diaphragm, increases abdominal pressure

○ **Clinical Features** - as for GORD

[Image of medical diagrams]


© Endeavour College of Natural Health
endeavour.edu.au
Hiatus Hernia

www.axiomllc.com/monthly_topic_2003-05.html
Hiatus Hernia

Treatment

- Similar to GORD
- Surgery
  ♦ repair diaphragm

Complications

- GORD
- Barrett’s oesophagus
- Oesophagitis

Readings and Resources

Resources:

○ Set Textbooks:

○ Additional textbooks:
COMMONWEALTH OF AUSTRALIA
Copyright Regulations 1969
WARNING
This material has been reproduced and communicated to you by or on behalf of the Endeavour College of Natural Health pursuant to Part VB of the Copyright Act 1968 (the Act). The material in this communication may be subject to copyright under the Act. Any further reproduction or communication of this material by you may be the subject of copyright protection under the Act. Do not remove this notice.