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
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

- **Dyspepsia / indigestion** – collective term for many symptoms
- **Heartburn (pyrosis), acidity,**
- **Dysphagia**
- **Nausea & Vomiting (bloody - haematemesis)**
- **GIT bleeding**
- **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 / Sub-sternal 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:

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<table>
<thead>
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<tbody>
<tr>
<td>• loss of Lower oesophageal sphincter (LOS) resting tone</td>
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<td>• transient LOS relaxation</td>
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<td>• increase in oesophageal mucosa to acid</td>
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<td>• delayed oesophageal clearance</td>
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<td>• large hiatus hernia</td>
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<tr>
<td>• delayed gastric emptying</td>
<td></td>
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<td>• Increased intra-abdominal pressure</td>
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<td>• Dietary / environmental factors eg chocolate, coffee</td>
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Gastro Oesophageal Reflux Disorder

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

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

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Complications</th>
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<tbody>
<tr>
<td>o antacids, alginate antacids,</td>
<td>o Oesophagitis</td>
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<tr>
<td>o raising head of bed,</td>
<td>o Barretts oesophagus</td>
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<td>o weight loss, reduction</td>
<td>o Anaemia</td>
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<td>alcohol (OH), smoking</td>
<td>o Strictures</td>
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<td>o drugs - H2 receptor</td>
<td>o Oesophageal cancer</td>
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<td>antagonists, proton pump</td>
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<tr>
<td>inhibitors, prokinetic</td>
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<td>agents</td>
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<td>o Avoid large meals</td>
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</tbody>
</table>
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](http://www.barrx.com/.../index.cfm/10)
Oesophagitis

Aetiology

- GORD
- Candidiasis
- Ingestion corrosives
- Medications eg NSAIDS
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

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:**
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