Acute Abdomen

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Acute Abdomen

- A rapidly developing acute abdominal pain
- A diagnostic challenge
- Main causes include:
  - Obstruction
  - Peritonitis
  - Intraperitoneal bleeding
  - Mesenteric infarction
Presentation

- Depends on aetiology and pathogenesis
- Typical symptoms at start of the disease
Common causes of acute abdomen

- Appendicitis
- Cholecystitis
- Pancreatitis
- Perforated peptic ulcer
- Small bowel obstruction
- Mesenteric ischaemia/infarction
- Diverticulitis
Pain

- **Somatic pain**
  - Localized, sharper, brighter and lateralized e.g. acute appendicitis
  - Transmitted through intercostal and phrenic nerves to CNS
  - Irritation of parietal peritoneum, root of mesentery and diaphragm

- **Visceral pain**
  - Dull, vague and poorly localized, not lateralized
  - Transmitted through sympathetic and parasympathetic nerves
  - Increased tension in wall, stretching of capsule of solid organ, ischaemia, and certain chemicals
Diagnosis

• Easy in early stages
• Later symptoms overlap
• Experienced clinicians make a correct diagnosis of acute abdomen on 4 out of 5
• Younger doctors in half the cases
• Computer-assisted diagnosis
History

- Pain
  - Site
- Radiation
- Onset
- Frequency
- Aggravation and alleviation
- Severity and type of pain
Appendicitis

- Onset: Hours to days
- Location:
  - Early: periumblical
  - Late: right lower quadrant
- Character: Dull ache
- Radiation: Right lower quadrant
- Intensity: 3/5
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset</td>
<td>Minutes</td>
</tr>
<tr>
<td>Location</td>
<td>Epigastrium</td>
</tr>
<tr>
<td>Character</td>
<td>Sharp/burning</td>
</tr>
<tr>
<td>Radiation</td>
<td>None</td>
</tr>
<tr>
<td>Intensity</td>
<td>5/5</td>
</tr>
</tbody>
</table>
Cholecystitis

- Onset: Minutes to hours
- Location: Right upper quad.
- Character: Sharp
- Radiation: Scapula
- Intensity: 3/5
Small Bowel Obstruction

- Onset
- Location
- Character
- Radiation
- Intensity

- Hours to Days
- Periumblical
- Crampy
- None
- 3/5
LOCATIONS FOR ACUTE ABDOMINAL PAIN CAUSED BY DIFFERENT CONDITIONS

Anterior locations:
- Biliary colic
- Cholecystitis, pancreatitis, duodenal ulcer
- Appendicitis
- Colon pain
- Renal colic
- Small intestine pain
- Ureteral colic

Posterior locations:
- Pancreatitis
- Perforated duodenal ulcer
- Cholecystitis
- Penetrating duodenal ulcer
- Pancreatitis, renal colic
- Rectal lesions
History

- Nausea and vomiting
- Bowel function
- Past history
- Drugs
Physical signs

• Vital signs
  – pulse
  – respiratory rate
  – temperature
  – blood pressure

• General Inspection
  – Position of patient
  – Pallor and sweating
  – Facies abdominalis
Physical Signs

• Abdominal examination
  • Inspection
    – scars
    – shape
    – peristaltic waves
    – movement with respiration
  • Palpation
    – pointing test
    – muscle guarding and rigidity
    – tenderness and rebound tenderness
    – organomegally
    – hernial orifices

• Percussion

• Auscultation

• P/R and V/E
Investigations

- Laboratory
  - FBC
  - Urinalysis
  - Lipase and amylase
  - Sickling test
  - Urea and electrolytes

- Radiology
  - Erect and supine abdominal x-rays
  - Chest x-ray
Investigations

- Ultrasonography
- Laparoscopy
- Diagnostic Laparotomy
Acute Cholecystitis
Peritonitis

- **General infective symptoms**
  - Fever
  - Leucocytosis

- **Local infection signs in abdomen**
  - Guarding
  - Tenderness
Conclusion

- Attention to detail and clarity of thought
- Management may depend on clinical skills only
- Of every 5 patients admitted to hospital with acute abdomen:
  - one has diagnosis changed
  - two are discharged without being told cause of their pain