



Central & Upper Abd Pain

Chapters

Ch 1 : Pathophysiology of Pain

Ch 2 : Causes of abdominal pain

Ch 3: Individual Cases

a. Chronic cholecystitis

b. Acute cholecystitis

c. Pancreatitis

d. Appendicitis

c. Perf duodenal ulcer

Pathophysiology of Pain

Pain Types

- **Types of Pain**

 - Somatic pain

 - Visceral pain

- **Visceral Pain**

 - From Viscera

 - NS is autonomic

- **Somatic Pain**

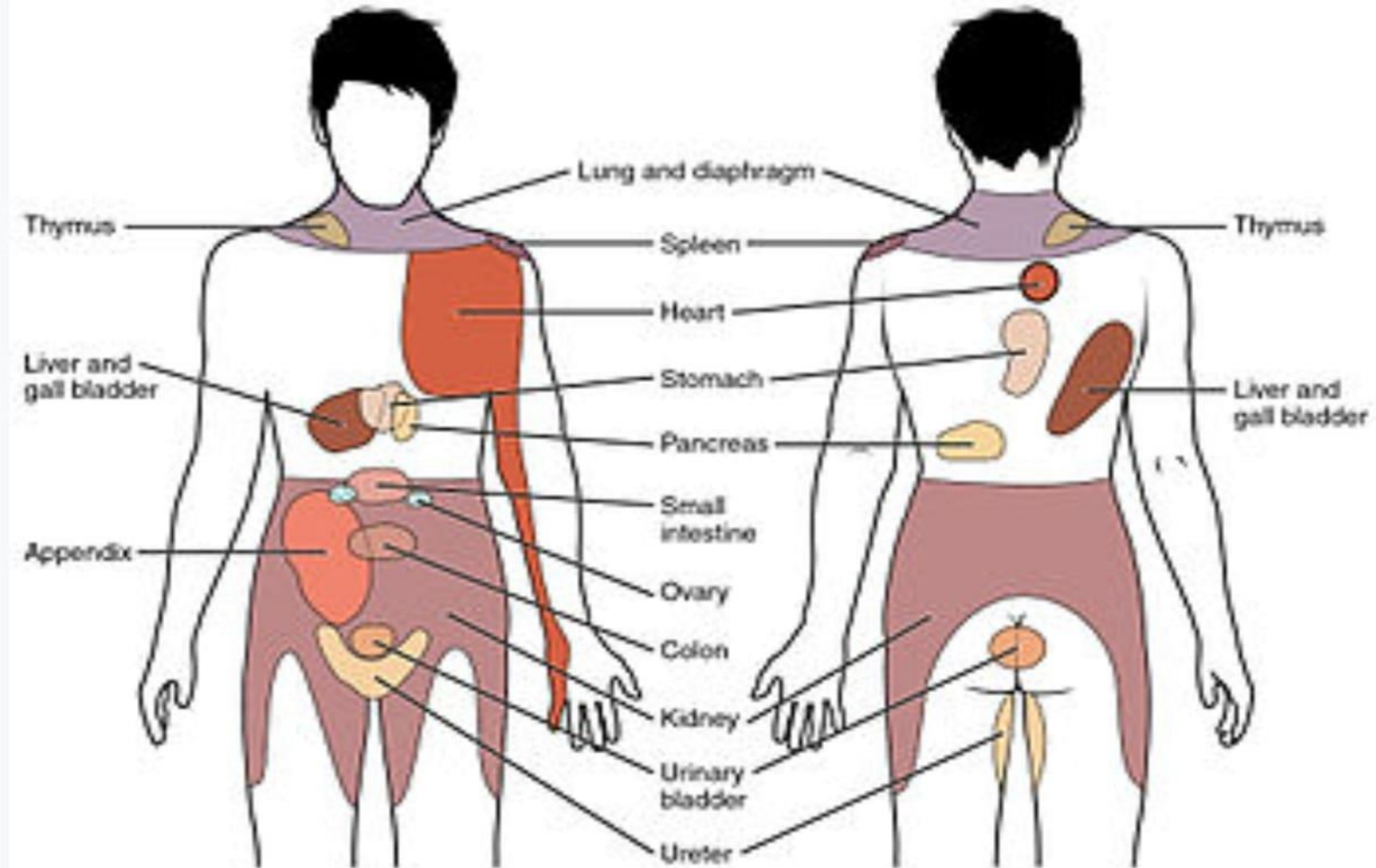
 - From body surfaces

 - NS is somatic

Visceral vs Somatic Pain

Item	Visceral Pain	Somatic Pain
Cause	Stretch / Ischemia	Cutting or burning
Nature	Colicky	Continuous
Intensity	Mild to moderate	Severe in intensity
Localization	Generalized Poorly localized	Well localized Sharply Localized
Radiation	Radiates and Refer	Does not refer

Referred pain



Referred Pain

- Definition

Defined as pain perceived at a location away from the site of painful stimulus

(Site of pain & site of stimulus are discontinuous)

- Examples

Biliary colic to Rt shoulder

Ureteric colic to upper thigh

Cardiac pain to Lt jaw

Ice cream headach

- Cause

Multiple inputs of sensory fibers

Radiating Pain

- **Definition**

Defined as a travelling pain that spreads from the original point of origin to a larger area of body

(Site of origin and site of effect are continuous)

- **Examples**

Pain caused by compression of nerves

- **Cause**

Pain sensations are carried along the length of the nerve

Radiating Pain

- **Definition**

Defined as a travelling pain that spreads from the original point of origin to a larger area of body

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- **Examples**

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- **Cause**

Pain sensations are carried along the length of the nerve

Inflammation Phases

- Two phases

Intraabdominal inflammation develops in two phases

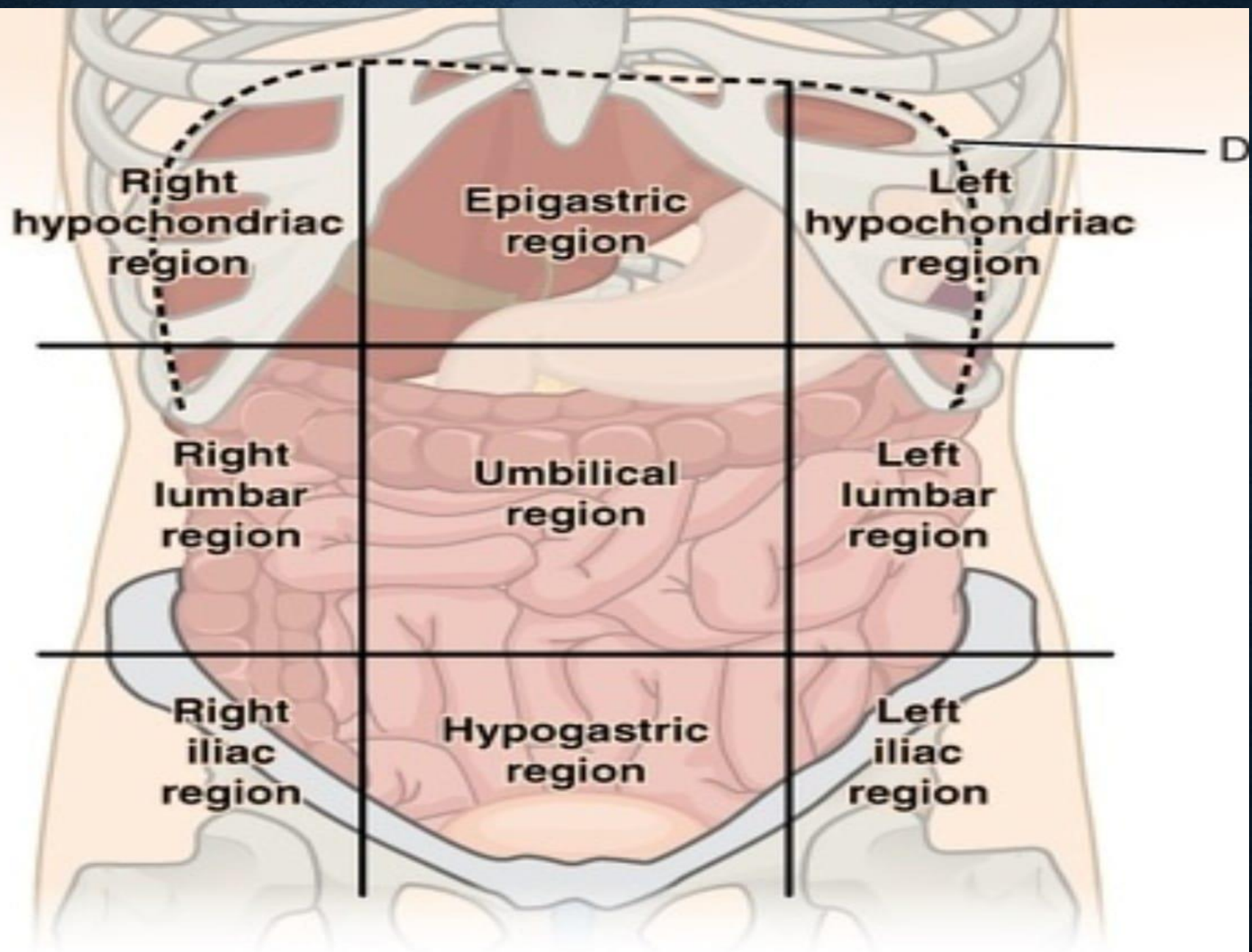
1. Inflammation limited to organ
2. Inflammation of parities

- Phase 1 (Local peritonitis)

- Phase 2 (General peritonitis)

How to Investigate Pain

1. Onset - (Biliary colic)
2. Sites - (Quadrants of Abdomen)
3. Duration - (Time to develop)
4. Progression
5. Character - (Colic or Somatic)
6. Severity - (Moderate or Severe)
7. Associated symptoms



(a) Abdominopelvic regions

Causes of Pain

U Abd & Central

- Generalized Pain

- Surgical Causes

1. Inflammation - Peritonitis
2. Infection - TB
3. Obstruction
4. Benign tumor
5. Malignant Tumor
6. Ischemia & Gangrene
7. Perforation of viscus
8. Collection

- Medical Causes

1. Gastroenteritis
2. IBS
3. Constipation

- Upper Abd Pain

- Surgical Causes (Clinically)

1. Cholecystitis / Hepatitis
2. Acid reflux disease
3. Pancreatitis
4. Intestinal Pain
5. Colonic Pain



Individual Case

Descriptions

Generalized Abd Pain

- **Common Causes**

- Intestinal Obst / Strangulation
- Pancreatitis
- Bowel ischemia
- Hemoperitoneum
- Perforated viscus DU – Appendix

- **Cause of Pain**

- Obstruction - Distention
- Pancreatitis - Inflammation
- Ischemia -
- Hemoperitoneum - Inflammation
- Perforated DU - chemical burn of peritonium

- **Common Causes**

- Intestinal Obst / Strangulation

- Pancreatitis

- Bowel ischemia

- Hemoperitoneum

- Perforated viscus DU - Appendix

- **Pain characteristics**

- Onset - Depends upon rapidity of pathology – From minutes to hrs

- Duration - Depend upon clinical scenario

- Nature - Colic initially (Autonomic)

- Pain later on (Somatic)

- Aggravating & relieving factors

- H/O of previous attacks

Chronic Cholecystitis

- Cause of Pain (Biliary colic)

Obstruction of Cystic duct by a stone
Resulting in distention of gall bladder
(Note - there is no inflammation)
Autonomic pain

- Pain characteristic

Fat, fertile, flatulent female of forty

Onset - It develops typically after a heavy meal causing forceful contraction of gall bladder and stone impaction

Site - Rt upper Q

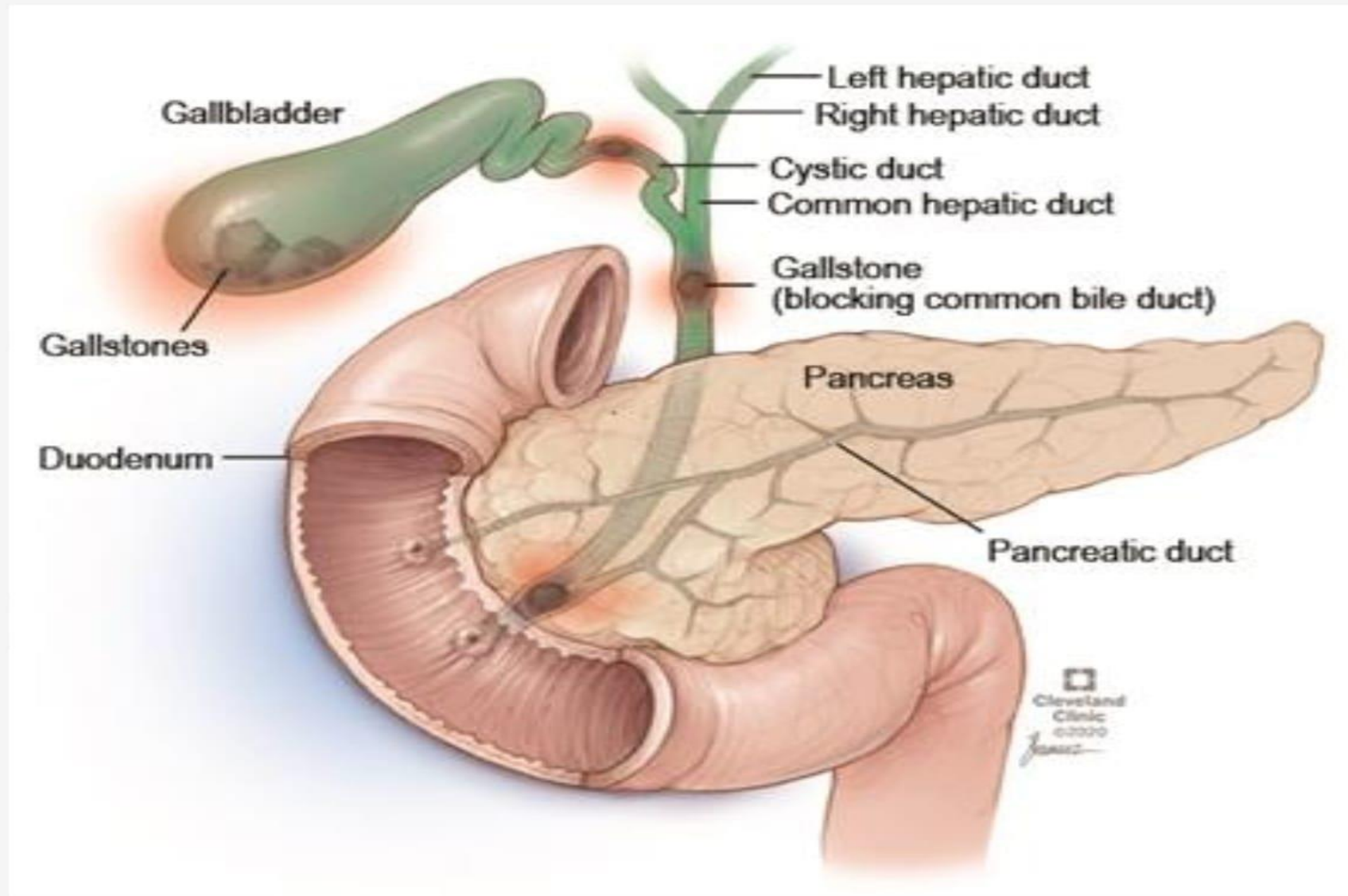
Radiation - To epigastrium / Along Rt side to top of scapula

Character - Though colic but practically it is almost constant

Duration - Lasts few minutes to hrs

H/o of - previous episodes

Clinically - Pt is stable / Does not look sick



Anatomy of the gallbladder, featuring gallstones stuck in the cystic duct.

Acute Cholecystitis

- Cause of Pain (Inflammation)

After few hrs if GB remains distended

Ischemia / Micro organisms proliferation / Inflammation sets in

Now biliary colic converts into pain of acute cholecystitis

- Pain characteristic

Onset :- It develops after 12 to 14 hrs of biliary colic

Site :- Rt upper Q

Radiation :- To Rt shoulder (phrenic N) / Along Rt side to top of scapula

Character :- Pain & persistent

Intensity :- Severe requiring i/v analgesics

Duration :- Can continue for days

H/o of :- previous episodes of biliary colic

Clinically :- Pt looks sick

Fever , Nausea , Vomiting +

Acute Appendicitis

- Cause of Pain

Luminal obstruction of appendix by a fecalith

Causing - blockade, distention, ischemia, microorganism growth

Resulting in acute inflammation

Colic initially , Later pain

- Pain characteristic

Young male more common

Onset :- Starts as dull vague periumbilical or epigastric pain (colic)

Radiation :- After 4 to 6 hrs shifts to Rt iliac fossa (pain)

Character :- Initially colic, Later pain

Intensity :- Mild ot low moderate / easily tolerated by the Pt

Duration :- May continue for few days

H/o of :- previous episodes not significant

Clinically :- Pt is stable / Does not look sick

Acute Pancreatitis

- Cause of Pain

Luminal obstruction of Pancreatic duct by a stone

Causing - blockade, distention, rupture of acini

Liberation of proenzymes / activation of enzymes

Autodigestion of pancreatic tissue and surrounding tissues

- Pain characteristic

More common in females cos of gall stones

Onset :- Starts as dull vague periumbilical or epigastric pain (colic)
Which slowly increases in intensity over hrs to days

Radiation :- To back

Character :- Pain / fairly constant

Intensity :- Mild to low moderate / easily tolerated by the Pt

Duration :- Depends upon scenario

H/o of :- Biliary colic

Clinically :- Pt may be stable / or unstable in shock