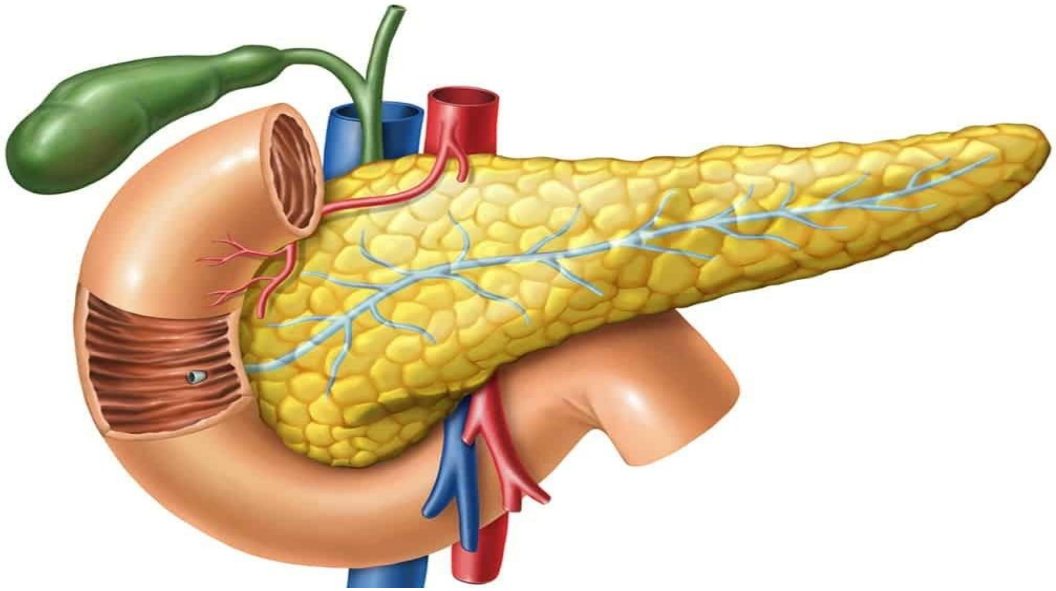
Acute Pancreatitis



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Acute pancreatitis is defined as an acute condition presenting with abdominal pain, a threefold or greater rise in the serum levels of the pancreatic enzymes amylase or lipase, and/ or characteristic findings of pancreatic inflammation on contrast-enhanced CT.

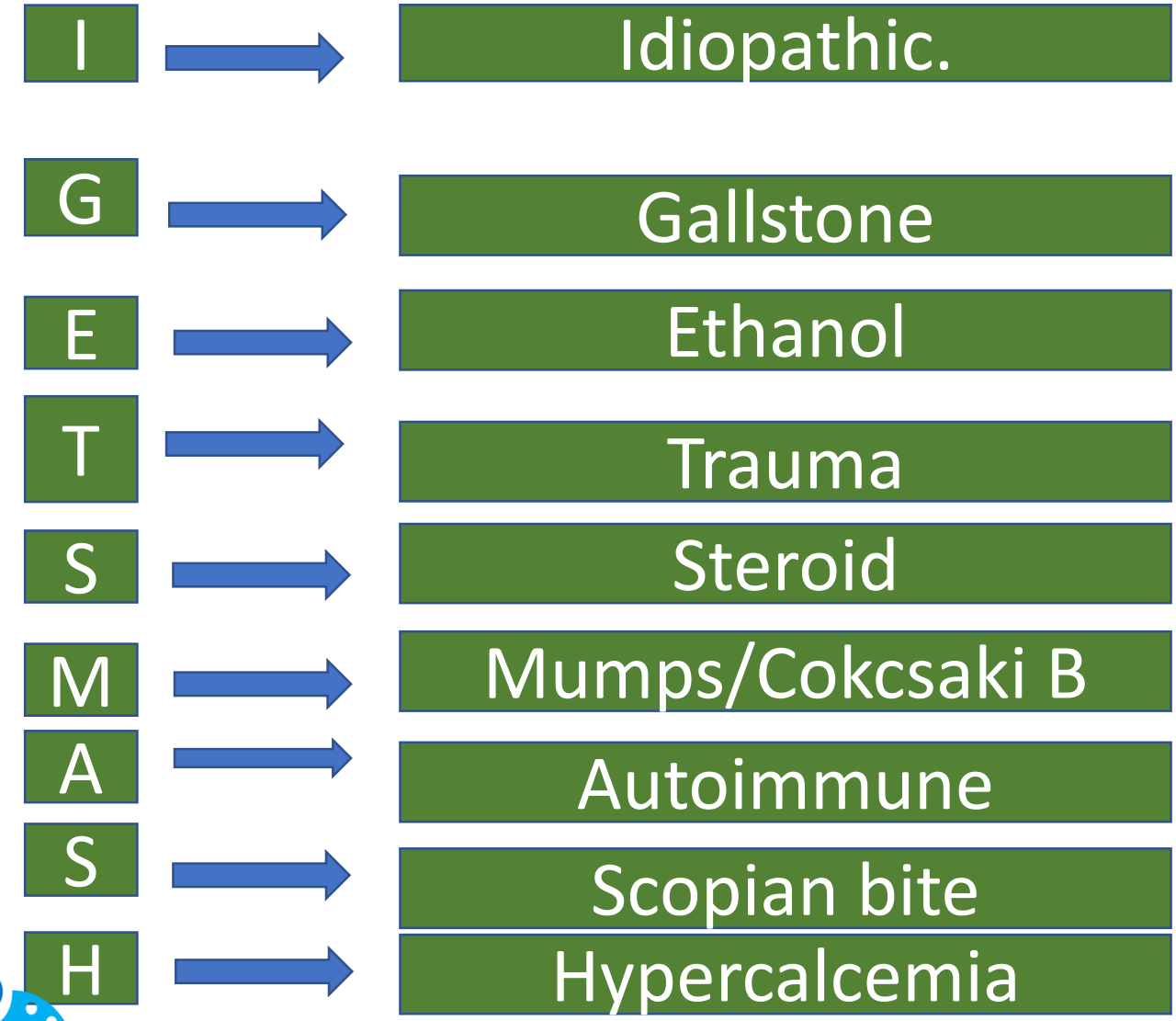
Incidence

- Worldwide, the annual incidence is range from 5 to 50 per 100 000.
- This is more common in young men and older women.

Pathogenesis

- The underlying mechanism of injury in pancreatitis is thought to be premature activation of pancreatic enzymes within the pancreas, leading to a process of autodigestion.
- Anything that impair function of the acinar cell can trigger acute pancreatitis.

Aetiology



Clinical Presentation

- Pain(cardinal symptom) ⟶ sudden onset severe epigastric pain radiate to the back and pain relieved with leaning forward.
- Nausea, vomiting and retching
- Tachypnoea
- Tachycardia
- Mild fever
- Features of cholangitis
- Grey turner's sign
- Cullen's sign

Investigations

Investigation

To diagnose

- Serum amylase
- Serum lipase
- CECT

To find out etiology

- Erect chest x ray
- Abdominal x ray
- USS of abdomen
- ERCP

Investigations

To assess the severity

- Full blood count
- Urea & electrolyte
- Serum calcium level
- Serum albumin level
- Fasting blood sugar level
- CRP
- Arterial blood gas

Atlanta classification of acute pancreatitis (1992)

Mild acute pancreatitis:

- no organ failure no local or systemic complications.

Moderately severe acute pancreatitis

- organ failure that resolves within 48 hours (transient organ failure); and/or local or systemic complications without persistent organ failure.

Severe acute pancreatitis

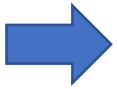
persistent organ failure (>48 hours);

- single organ failure;
- multiple organ failure.

Scores use in pancreatitis

- Scoring system use to early identification of organ failure.
- Severity stratification ideally at 24hrs,48hrs and 7das.

Ranson score
Glasgow score



score of 3 or more at 48 hours indicates a severe attack

- APACHE
- SAPS
- SOFA
- MODS
- Modified Marshall scoring systems

use in intensive care unit

Ranson score

On admission
Age > 55years
White blood cell count >16 × 109/L
Blood glucose > 1.1 mmol/L(>200mg/dL)
LDH >350 units/L
Within 48 hours
Haematocrit fall of 10% or greater
Blood urea nitrogen rise >5 mg/dL despite fluids
Arterial oxygen saturation (PaO2) <8 kPa (60 mmHg
Serum calcium <2.0 mmol/L
Base deficit >4 mmol/L
Fluid sequestration >6 litres

Glasgow score

Within 48 hours
Age >55 years
White blood cell count >15 × 109/L
Blood glucose >10 mmol/L (no history of diabetes)
LDH > 600 units/L
Serum urea >16 mmol/L (no response to intravenous fluids)
Arterial oxygen saturation (PaO2) <8 kPa (60 mmHg)
Serum calcium <2.0 mmol/L
Serum albumin <32 g/L

Management

Mild pancreatitis

- conservative approach
- Intravenous fluid administration
- Brief period of fasting
- Analgesics
- Antiemetics
- No need antibiotics

Management

Severe acute pancreatitis

- Admission to intensive care or high dependency unit
- Analgesics
- Aggressive Fluid resuscitation
- Oxygen
- Frequent monitoring- central venous pressure, Catheter, Blood gas
- NG drainage
- Antibiotic prophylaxis <14 days
- Enteral feeding
- ERCP within 72 hours for severe gall stone pancreatitis

Complication

- Systemic complications
- Cardiogenic shock
- Arrythmia
- Renal failure
- Disseminated intravascular coagulation
- Hypocalcemia
- Hyperglycemia
- hyperlipidemia

Complication

- Local complication
- Acute fluid collection
- Pancreatic necrosis- Sterile/ Infected
- Pancreatic abscess
- Pseudocyst
- Pancreatic ascites
- Pleural effusion
- Portal or splenic vein thrombosis

PANCREATIC PSEUDOCYST

Acute pancreatic fluid collection after 4 weeks is an acute pseudocyst.
Typically occurs in lesser sac.
No epithelial lining and has capsule.
It is collection of pancreatic enzyme, blood and necrotic tissue

Clinical features

- Recurrent or persistent upper abdominal pain
- Nausea / Vomiting
- Early satiety
- Anorexia
- Loss of weight
- Jaundice
- Abdominal mass

Investigations

Laboratory tests	S.Amylase- 50% of cases it is elevated ? Cystic fluid analysis
Radiology	CT scan ? USS
Endoscopic	ERCP

Complications

- Infection
- Haemorrhage
- Obstruction
- Rupture

Treatment

Non operative if pseudocyst

New < 6 weeks
Asymptomatic
No complications
< 6 cm

Percutaneous drainage if pseudocyst does not communicate with pancreatic duct and who cannot tolerate surgery.

Treatment

Excision → Done in symptomatic immature pseudocyst with complications. May need Whipple's or distal pancreatectomy.

Internal drainage → Open or endoscopic

- Cystojejunostomy
- Cystogastrostomy
- Cystoduodenostomy

Outcomes

- The overall mortality from acute pancreatitis has remained at 10–15% over the past 20 years.