



SNS COLLEGE OF NURSING
Saravanampatti (po), Coimbatore.

DEPARTMENT OF NURSING

COURSE NAME : BSC (NURSING) II YEAR

SUBJECT : MEDICAL SURGICAL NURSING

UNIT: IV: DISORDERS OF GASTRO INTESTINE SYSTEM

TOPIC : PANCREATITIS



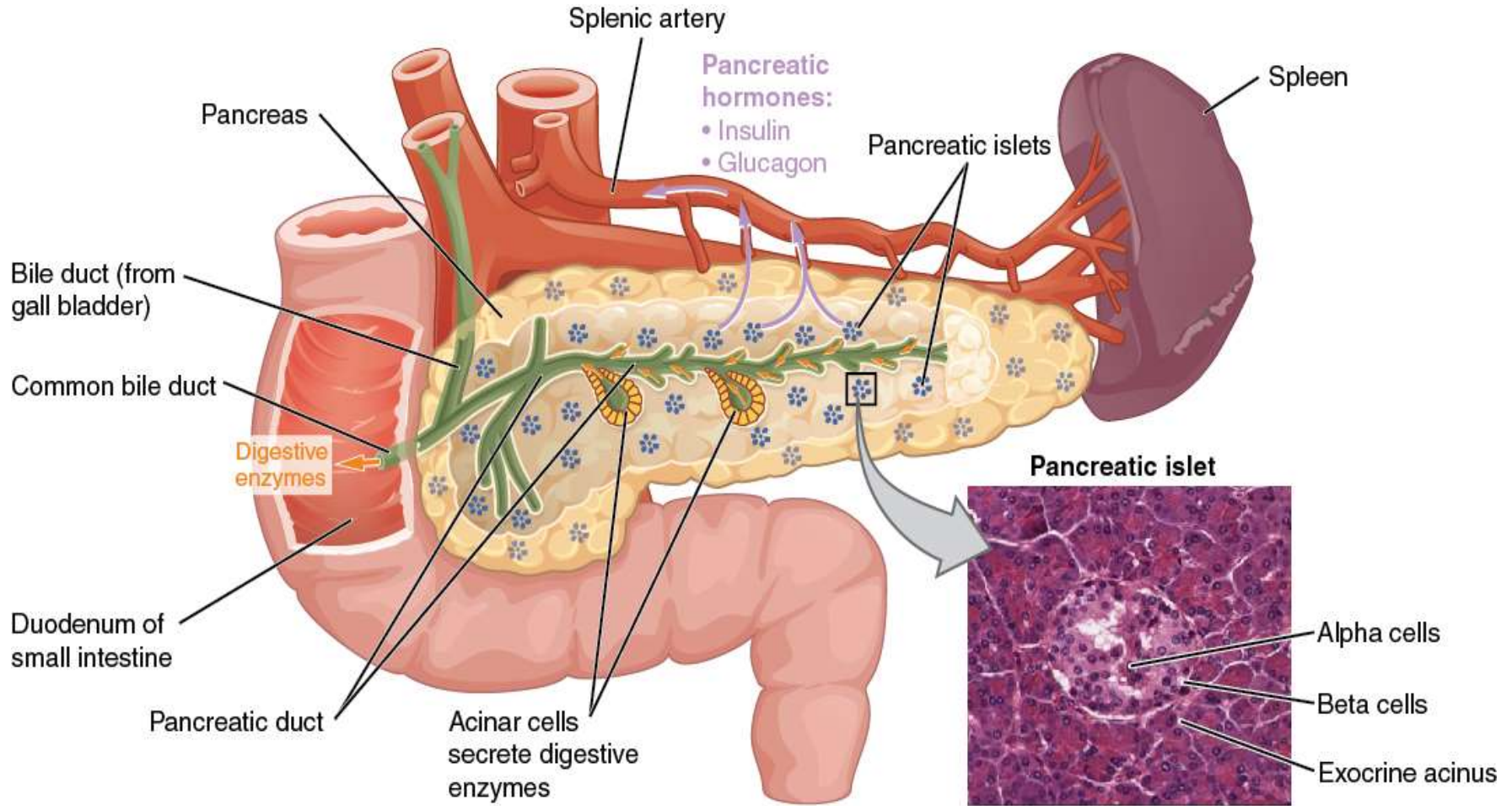
INTRODUCTION



- The pancreas is a large gland behind your stomach and next to your small intestine. It is commonly described as autodigestion of the pancreas.
- Pancreatitis may start suddenly and last for days or it can occur over many years. It has many causes, including gallstones and chronic, heavy alcohol use.



- ❖ The **pancreas** is an elongated, tapered organ located across the back of the belly, behind the stomach.
- ❖ The right side of the organ-called the head-is the widest part of the organ and lies in the curve of the duodenum, the first division of the small intestine.





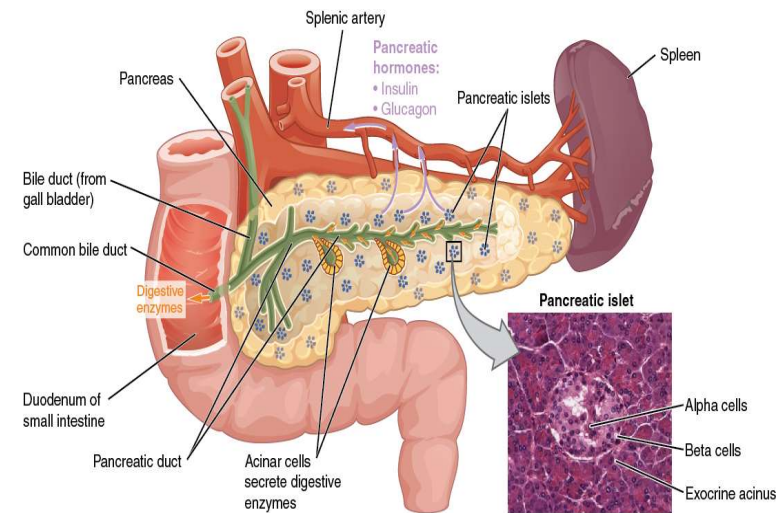
ANATOMY AND PHYSIOLOGY

- ❖ The pancreas secretes pancreatic enzymes, including amylase and lipase, through the pancreatic duct when stimulated by cholecystokinin and secretin to aid in digestion of carbohydrates and fat in the small intestine.
- ❖ The pancreas also secretes hormones, such as insulin and glucagon, which help to regulate and maintain normal serum glucose.

DEFINITION

Pancreatitis (inflammation of the pancreas) is a serious disorder.

Inflammation of the organ lying behind the lower part of the stomach (pancreas)

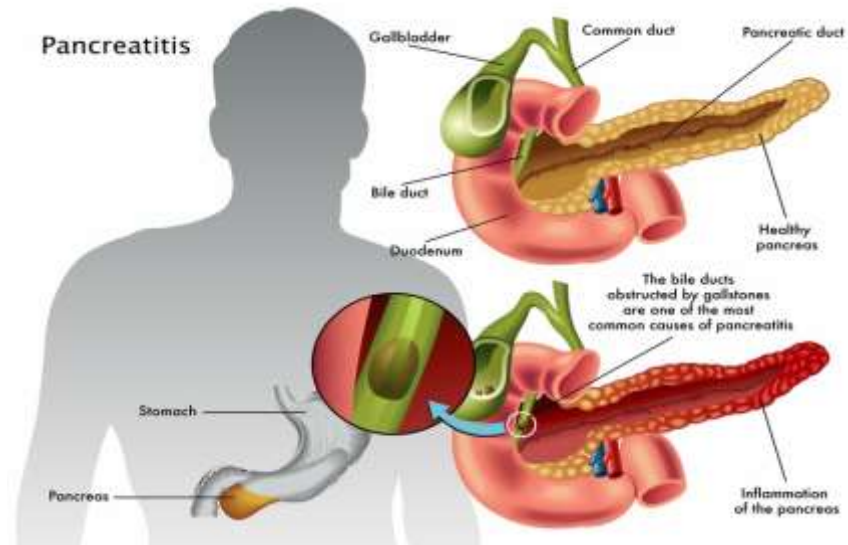


TYPES

- **Acute pancreatitis** can be a medical emergency associated with a high risk for life-threatening complications and mortality.
- **Chronic pancreatitis** often goes undetected until 80% to 90% of the exocrine and endocrine tissue is destroyed. Acute pancreatitis does not usually lead to chronic pancreatitis unless complications develop.

ACUTE PANCREATITIS

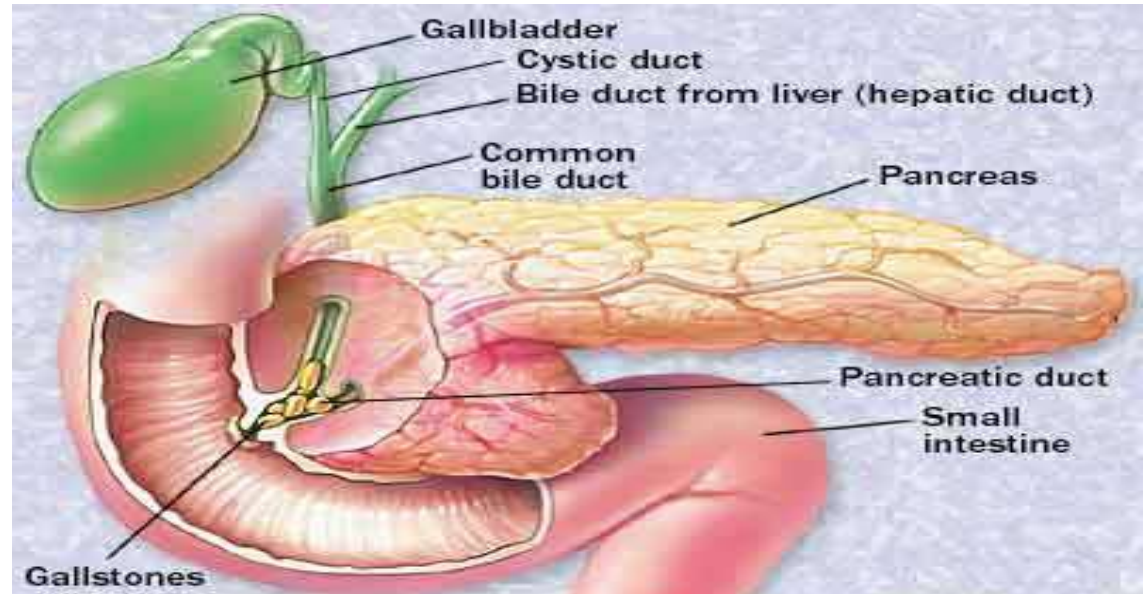
- Acute pancreatitis is an inflammation of the pancreas, ranging from mild edema to extensive hemorrhage, resulting from various insults to the pancreas. It is characterized by a discrete episode of abdominal pain and serum enzymes elevations.



CAUSES

Common (90% of cases)

- Gallstones
- Alcohol
- Idiopathic
- Post-ERCP



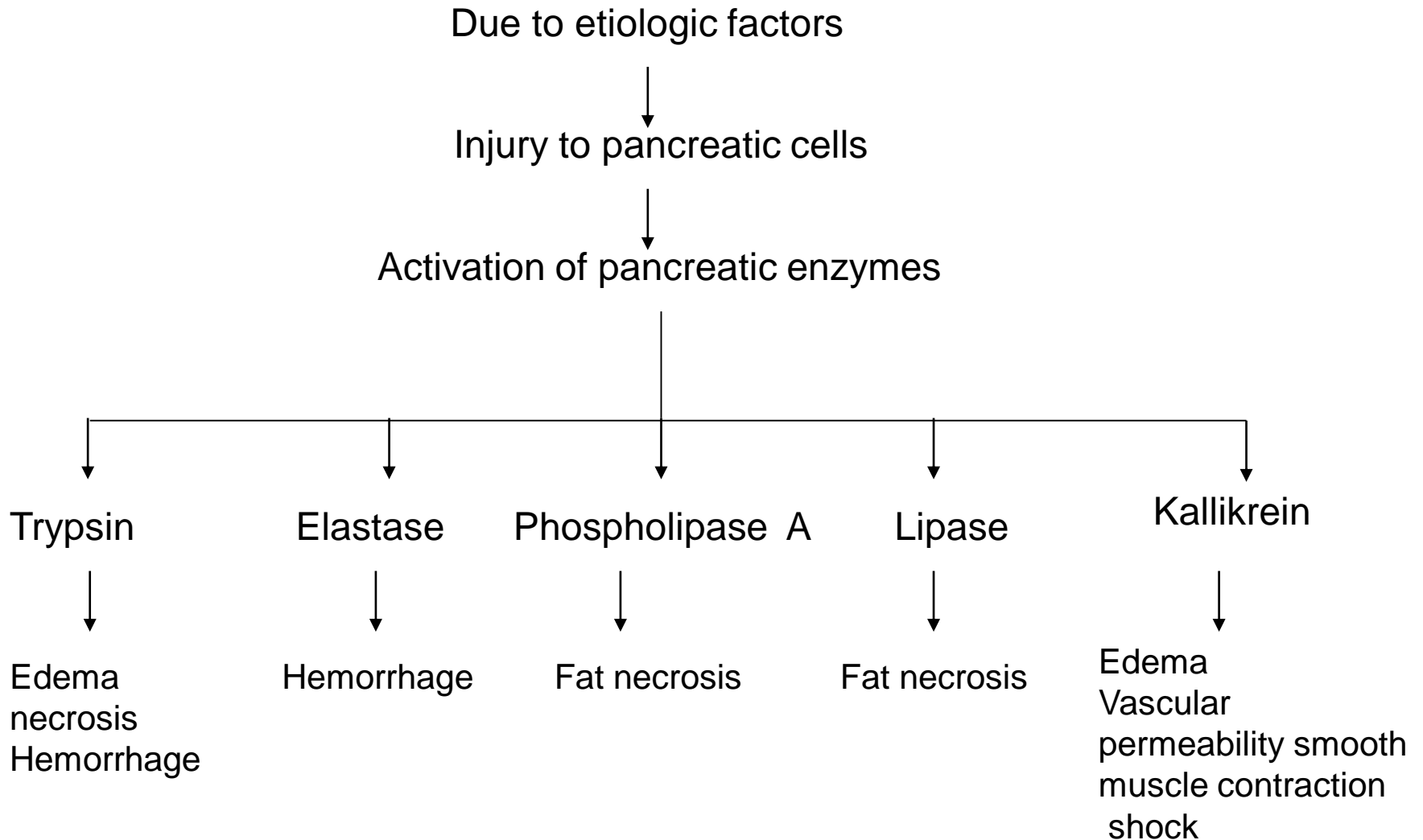
CAUSES

- Post-surgical(abdominal,cardiopulmonary bypass) Trauma
- Drugs (azathioprine, thiazide diuretics, sodium valproate)
- Metabolic(hypercalcaemia,hypertriglyceridaemia)
Sphincter of Oddi dysfunction

CAUSES

- Infection (mumps, Coxsackie virus)
- Hereditary
- Renal failure
- Organ transplantation (kidney, liver)
- Severe hypothermia
- Petrochemical exposure

PATHOPHYSIOLOGY



Turner's sign

Purplish discoloration of the flanks

Cullen's sign

Periumbilical area occurs in extensive hemorrhagic necrosis of the pancreas



- History collection
- Physical Examinations
- Serum amylase, lipase, glucose, bilirubin, alkaline phosphatase, lactate dehydrogenase, AST, ALT, potassium, and cholesterol may be elevated.
- Serum electrolytes, Abdominal x-ray, CT scan, Chest X-ray



MEDICAL MANAGEMENT

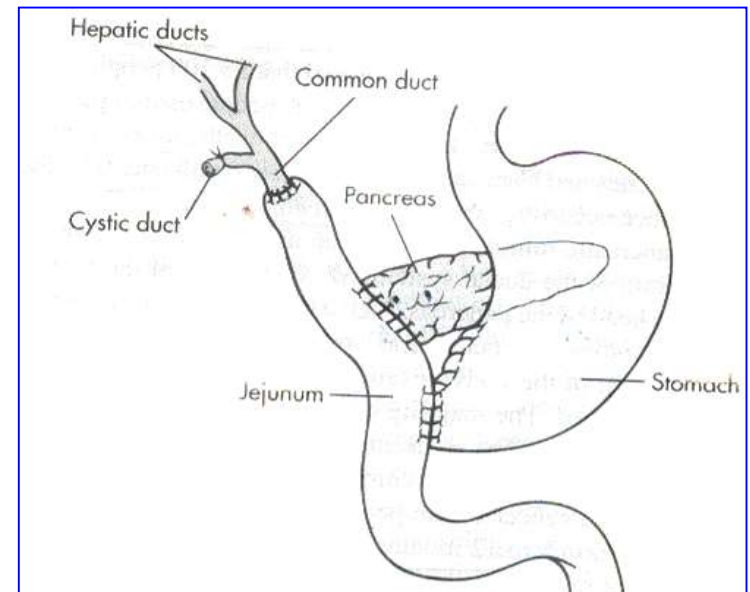


- Electrolyte replacements as needed.
- Sodium bicarbonate to reverse metabolic acidosis.
- Regular insulin to treat hyperglycemia.
- Antibiotic therapy for documented infection or sepsis

- Minimizing pancreatic secretions
 - ✓ Nasogastric suction
 - ✓ Oral intubation
- Nutritional support- Rest of the GI tract.
- NG intubation and suction to relieve gastric stasis, distention, and ileus, if needed.
- Respiratory support
- Peritoneal lavage

SURGICAL MANAGEMENT

- Incision and drainage of infection and pseudocysts.
- Debridement or pancreatectomy to remove necrotic pancreatic tissue.
- Cholecystectomy for gallstone pancreatitis.
- Subtotal pancreatectomy
- Whipple's procedure



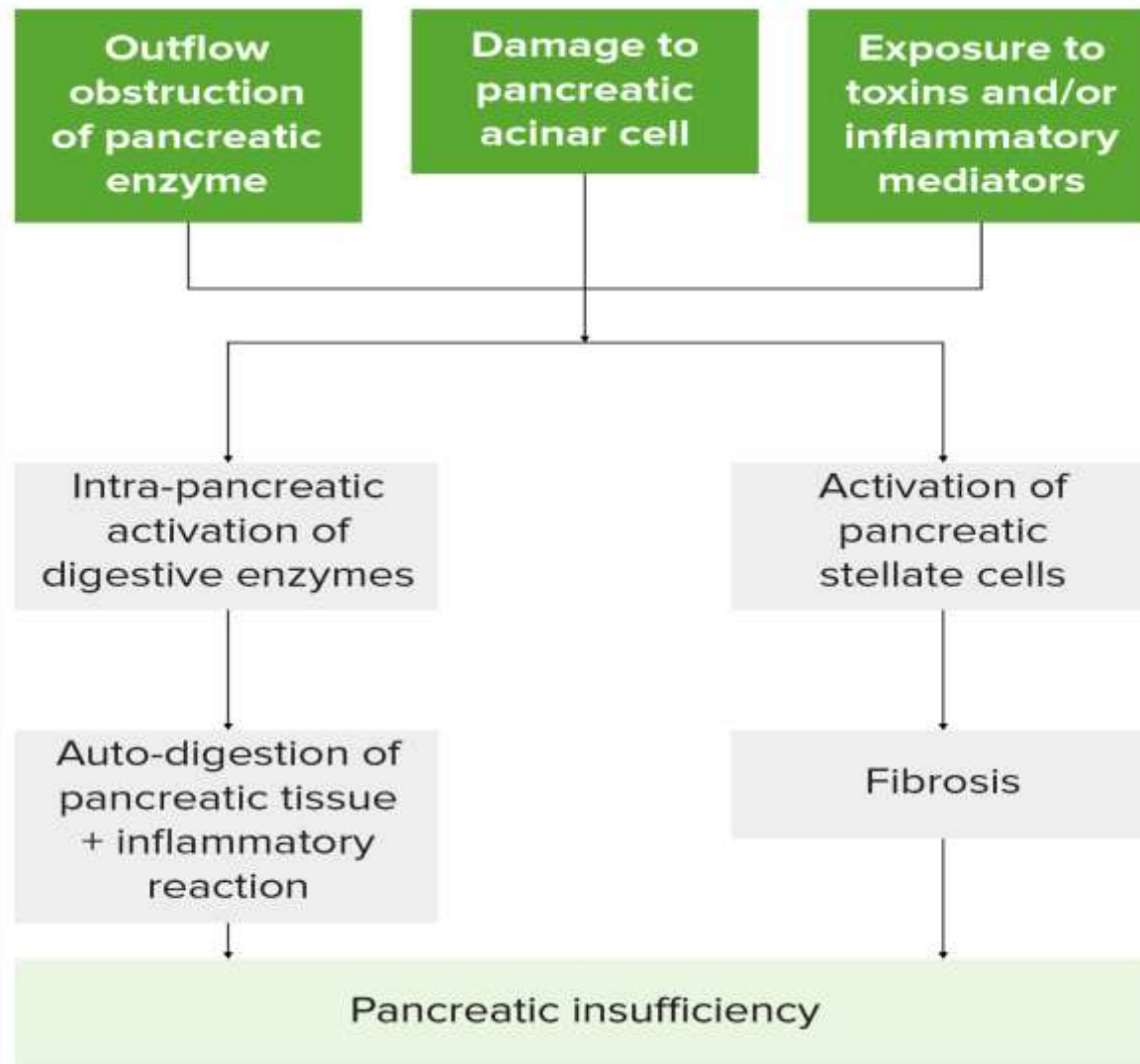
- Obtain history of gallbladder disease, alcohol use, or precipitating factors.
- Assess GI distress, including nausea and vomiting, diarrhea, and passage of stools containing fat.
- Assess characteristics of abdominal pain.
- Assess nutritional and fluid status.
- Assess respiratory rate and pattern and breath sounds.

CHRONIC PANCREATITIS

- Chronic pancreatitis is defined as the persistence of pancreatic cellular damage after acute inflammation and decreased pancreatic endocrine and exocrine function.
- Progressively destroyed as it is replaced with fibrotic tissue.

- ✓ Alcohol abuse
- ✓ Hyperparathyroidism
- ✓ Hereditary pancreatitis
- ✓ Malnutrition
- ✓ Biliary tract Disease
- ✓ Trauma to the pancreas.
- ✓ Unknown

PATHOPHYSIOLOGY



- Pain is usually located in the epigastrium or left upper quadrant, frequently radiating to the back; similar to that observed in acute pancreatitis, but more constant and occurring at unpredictable intervals. As the disease progresses, recurring attacks of pain will be more severe, more frequent, and of longer duration
- Weight loss, nausea, vomiting, anorexia.
- Malabsorption and steatorrhea occur late in the course of the disease.
- Diabetes mellitus



DIAGNOSTIC EVALUATION



- History collection
- Physical examination
- Serum amylase and lipase may be normal to low because of decreased pancreatic exocrine function.
- Fecal fat analysis determines need for pancreatic enzyme replacement.

- Bilirubin and alkaline phosphatase may be elevated if biliary obstruction occurs
- Secretin and cholecystokinin stimulatory test results - abnormal.
- Plain abdominal X-ray to determine diffuse calcification of the pancreas
- CT SCAN, ERCP

MEDICAL MANAGEMENT

Pharmacological therapy

- Morphine –relief of pain.
- Nitroglycerine or papaverine - relaxation of smooth muscles and relief of pain
- Antispasmodic(dicyclomine,propantheline bromide).

MEDICAL MANAGEMENT

- Carbonic anhydrase inhibitor (acetazolamide) reduction in volume and bicarbonate concentration of pancreatic secretions.
- Pancreatic enzyme replacement. & Treatment of diabetes mellitus.

- Nutritional management :
 - low in fat and high in protein and carbohydrates
 - & Small frequent feeding
- Pancreatic enzyme supplementation with meals
- Correct malabsorption of the fat-soluble vitamins (A, D, E, K) and vitamin B12
- Endoscopic placement of pancreatic stent allowing free flow of pancreatic juices through distorted and irregular/narrowed pancreatic duct

SURGICAL MANAGEMENT

- Pancreaticojejunostomy
- Sphincteroplasty
- Drainage of pancreatic pseudocyst
- (Whipple procedure, distal pancreatectomy) or removal of entire pancreas (total pancreatectomy).
- Auto transplantation of islet cells



Assessment



- Define Pancreatitis
- List down the Etiological factors
- Enumerate the clinical manifestation
- Discuss about the management



References



- BRUNNER & SUDDARTH, MEDICAL SURGICAL NURSING, 1ST EDITION
- LEWIS'S, MEDICAL SURGICAL NURSING, 9TH EDITION
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