### INTESTINAL OBSTRUCTION

#### Definition:

Intestinal obstruction occurs when there is interference with the normal caudal progression of intestinal contents.

#### Incidence:

A common surgical emergency. About 20% of surgical admission for acute abdominal condition are for intestinal obstruction.

- Actiology:
- Mechanical obstruction of the lumen (Dynamic)
- Inadequate propulsive motility (adynamic)

### 1. Mechanical obstruction

- There is increasing peristalsis working against an obstructing agent, which maybe:
  - a) Intraluminal
  - b) Intramural
  - e) Extra luminal

### a) Luminal causes

- i) Meconium
- ii) Intussusception
- iii) Impactions faecal, worms
- iv) Gallstones
- v) Imperforate anus
- V1) Bezoar,

### b) Intramural

- Atresia, stenosis
- Diverticulitis
- Strictures (e.g. radiation)
- Tumors or Neoplasia.

## c) Lesions extrinsic to bowel

- Adhesive bands
- Hernias
- Extrinsic Masses

eg: Annular panerease

Anomalous vessels

Neoplasms

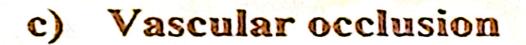
Volvulus

# ii) Inadequate propulsive motility (Adynamic)

- A: Neuromuscular defects

  Megacolon- Hirschsprings dx

  B: Paralytic ileus which may be due to
- Abdominal causes such as
  - Intestinal distension
  - peritonitis
  - Retroperitoneal lesions or
- Systemic causes such as
  - electrolyte imbalances
  - toxemias septicaemia



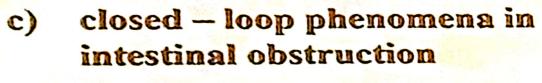
- Arterial thrombus
- Venous

## PATHOLOGY OF INTESTINAL OBSTRUCTION OR PATHOPHYSIOLOGY

- A) Fluid and electrolyte losses due to:
- Defective absorption of gasses and fluid
- Sequestration or secretion into lumen of fluids which is usually increased due to bowel wall permeability.
- Vomiting.

### b) strangulation

- Occurs when occlusion of blood supply to a segment of bowel in addition to lumen obstruction.
- Interference with the mesentric blood supply is the most serious complication of intestinal obstruction and frequently occurs 2° to adhesive band obstruction, hernia and volvulus.
- Strangulated bowel results in loss of blood and plasma-like fluid, and the gangrenous bowel leaks toxic materials through the bowel into the peritoneal cavity.
- Note that there occurs trans migration of bacteria and toxins since the wall of the intestines becomes devitalised. This may be absorbed into circulation thence septicaemias.



- Is present in many causes of intestinal strangulation and is typically illustrated by a distally occluded colon due to a neoplasm, while proximally, ileo-caccal valve prevents regurgitation of the large intestines contents into the ileum.
- at both ends and as a result of anti-peristals the pressure within the caccum becomes so high as to compress the blood vessels within its walls. If obstruction is unrelieved, ulcercation occurs thence perforation of caccum may occur.

### Clinical features

- 4 cardinal symptoms & signs
- 1. PAIN colicky or crampy felt synchronously with hyperpenstalsis.
- 2. VOMITTING: early in proximal intestinal obstruction and late in large bowel obstruction.
- 3 DISTENTION fluid, gases, faceal loading. visible peristalsis
- 4.CONSTIPATION = relative absolute no facces no flatus

### Others:-

- Dehydration, Hypokalaemia, Pyrexia, abdominal tenderness.
  - Strangulation cases get persistent pains. Symptoms are of sudden onset generalised tenderness and rigidity. Also if not generalised you get localised rebound tenderness.
- Hernia- irreducible, tense tender with absent expansile cough impulse.

### Laboratory / Investigations

- N X-rays Erect lateral decubitus.
- Gas shadows multiple and jejunum concertina effect ileum characterless

  Large intestines haustral folds.
- (multiple) if 3 or more & constant in adults

### Investigations continued

- Ba enema—in colonic lesions and also may be therapeutic for reduction of non strangulated intrassusception in children. Has its dangers: may cause perforation in inflammatory conditions such as diverticulitis or appendicitis.
- IVU look of ureteric calculi which may produce paralytic ilcus
- **■** Haematocrit
- U/E Bun due to dehydration K\*, Na\*
- Urinalysis P<sup>II</sup>

SE

Proteinuria

### Management

- Principles
  - a) Fluid and electrolyte therapy
  - b) Decompression of bowel

Rest the gut by nil per oral NG tube

Flatus tube Enema

c) Surgical procedures may be divided into five categories:-

### Surgical procedures:

- Procedures not requiring opening of bowel eg. lysis of adhesions, manipulation /reduction of intussusception, reduction of incarcerated hernia.
- Enterotomy removal of gallstones etc.
- Resection with primary anastomosis.
- 4. Short-circuiting anastomosis around an obstruction eg: ileotransverse anastomosis as in ca. Caecum or ascending colon
- Formation of a cutaneous stoma proximal to the obstruction eg. Ceacostomy, transverse colostomy.