

SMALL INTESTINE

- * Pylorus to ICT
- * $\approx 6\text{ m long}$ > in ♂
 - a) Fixed part - Duodenum (25 cm long)
 - b) Mobile part $\left\{ \begin{array}{l} \text{Jejunum } 2/5 \text{ part} \\ \text{Ileum } 3/5 \text{ part} \end{array} \right.$

Physiologically adapted for digestion & absorption

Relevant features

- * Large surface area - for absorption
 - Folds $\uparrow$ villi
- * Intestinal glands
- * Lymphatic follicles
- * Arterial supply - SMA
- * Lymphatics - circular course
- * N. Supply - Sympathetic & parasympathetic (Vagus)
(T9 - 11)

SMALL Intestine

Diverticulosis

Incidence → 1% in autopsy series
→ Solitary
→ Multiple
Primarily in jejunum

Site :- Mesenteric border

Causes 

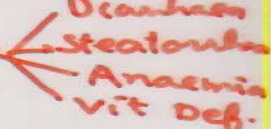
- Pulsion mucosal herniation
- Muscle coat defect
- Congenital

Complications :- Symptoms - majority

→ Diverticulitis & Perforation

→ Haemorrhage

→ Obstruction

→ Metabolic - blind loop syndrome 

- Diarrhoea
- Steatorrhea
- Anaemia
- Vit Def.

Diagnosis Incidental
Ba Meal follow thru

Treatment :- Resection of part of intestine
bearing diverticula & EEA.

Meckel's Diverticulum

Incidence 0.3 to 2.5% (autopsy series)

Failure of all or a portion of vitelline duct to
obliterate result in this condition.

Size 1- 26 cm (3-5 cm)
10- 150 cm from ICS

Complications

Diverticulum lining is same of ileum but heterotrophic mucosa may be present

- ① Peptic ulcer group
- ② Inflammatory group
- ③ Obstructive group - intussusception, volvulus, adhesions, bands, fibrous cord, foreign bodies
- ④ umbilical group - fistula, cyst, granuloma
- ⑤ Tumor group

Clinical Presentation

Mostly Incidental finding

- Ac Appendicitis
- Haemorrhage
- Inflammation
- obstruction
- Litter's Hernia

Diagnosis - BMFT

Treatment:-

Resection

Intestinal Infections

Amoebiasis

E. histolytica

* Universal

Pathology

Ulceration in intestinal mucosa

Ulcers :- → Bottle Necked & undermined edges

→ Floor - Necrotic & blood & pus

→ 75% cases - Rectum & Sigmoid colon

→ 25% cases - Scattered

Bx :- Scrapings by Volkmann's spoon
(Thin slice of affected mucosa)

Positivity does not mean that symptoms
are due to this organism (nonpathogenic)

Clinically:-

* Dysentery

* Appendicitis / Amoebic typhilitis

* Tenderness on caecum
& Sigmoid

* Rarely Rigidity

* Perforation - caecum / Rectosigmoid

* Haemorrhage → sloughing

* Granuloma - Progressive invasion
& secondary inflammation

(D/D Ca)

* Stricture

- * Intestinal Obstruction
- * Paracolic Abscess
- * Ulcerative colitis

Dx

Metronidazole - 800 mg tds

Tinidazole — 400 mg tds

Emetine hydrochloride 60mg OD SC

Diloxanide furoate

Secnidazole.

Typhoid

Salmonella infection

Presentation

1. Ileus
2. Haemorrhage
3. Perforation (3rd wk)
* Lower ileum

Drugs of choice

- Quinolone Derivative
- Ampicillin
- Bactrim DS
- Chloramycelin
- Third Generation Cephalosporins

Tuberculosis

1. Ulcerative Type

- * Secondary to Pulm. Koch's - ingestion
- * Multiple ulcers in terminal ileum
(Long axis lying transversely)
- * Corresponding serosa thickened / tubercles
- * Perforation - Rare
- * Stricture - common

Clinically

Diarrhoea

Loss of wt

Stool - Fetid odour & pus & blood

Pulm. TB

Barium Study - Terminal ileum, Caecum, Asc. colon
does not fill completely due to
narrowing & hypermotility

12

:-

ATT

Surgery for Stricture

II Hyperplastic TB

- * ICJ
- * High Resistance to disease.
- * Starts in lymphoid follicles

↓
Submucosa

↓
Subserous

* Thickening of Intestinal wall

↓
Narrowing of lumen

* Regional L-Nodes involvement & Caseation

* Abscess & fistula formation rare

* SAIO or Ac. Obst.

Clinically :- * Abd. Pain & Diarrhoea
(Blind loop syndrome)
Steatorrhoea, Anemia, Wt. Loss

* Mass in RIF

Radiological Features On Barium

* Contracted, pull up Caecum (Subhepatic)
Conical

* ICJ angle → obtuse

* Narrow terminal ileum

* Incompetent IC valve

* Shortening of Ascending colon.

✓

→ ATT Early cases

→ Surgery — Obstruction

* (R) Hemicolectomy

* Limited IC resection

* Ileostomy in very sick pt.

Hirschsprung's Disease

Congenital aganglionic megacolon

- Neurogenic form of intestinal obstruction
- Absence of ganglion cells in Myenteric (Auerbach) and submucosal (Meissner's plexus)
- Absence of submucosal & intermuscular N. plexi
- ↑ in size & prominence of N. fibres
- Sudden transition from aganglionic to ganglionic segment
- Extent varies

Clinical Presentation

- * Onset mostly in neonatal period
- * Delay in passage of meconium
- * Complete obstruction & distension - Relieved spontaneously or by enema

In older children :- Infrequent stools
Marked abd. distension
Poor nutrition
Faecoliths
Faecal soiling
Anal pain & bleeding

Serious Complications

Enterocolitis - watery / bloody stool

Cause — stasis, bacterial proliferation
Clostridium difficile

↓
Perforation, Septicemia, death

Mortality 25%

Diagnosis :-

Plain x-Ray — Colonic distension
— Absence of air in rectum

Contrast Enema — Transition Zone

Colon dilated above zone

Total colonic aganglionosis — microcolon

Confirmation By Bx — rectal submucosal
to see for ganglion cells

D/D Meconium plug / Ileus
Atresia

Treatment

Excision of entire aganglionic cell segment

Initial Rx — Stoma — transverse colon

Modified Duhamel operation

Abdominal pull thru

Coloanal anastomosis

Ileo proctostomy.