



Round : General surgery

Group no : B3.....

Done By : Fatima abu assal

Small bowel conditions

Intestinal obstruction:

✨ PTs present with colicky pain, vomiting, dehydration and electrolytes loss.

🌸 most common cause in small bowel obstruction is adhesions

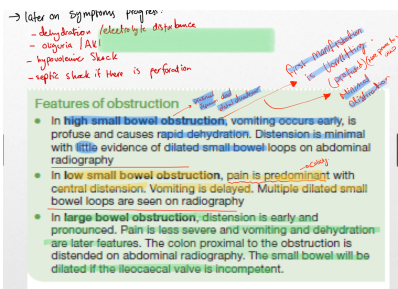
✨ post operation (we use Gastrografin in this case if the patient has no evidence of ischemia or peritonitis).

🌸 Hernia is the second most common cause.

✨ Closed-loop obstruction: bowel is obstructed proximal and distal points ex; (volvulus, adhesions from two points, enlarged bowel with competent ileocecal valve), surgical management.

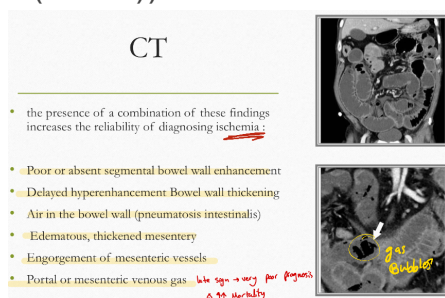
🌸 The characteristic radiological sign of gallstone ileus is Rigler's triad (small bowel obstruction, pneumobilia, atypical mineral shadow on radiology)

✨ Acute intussusception (iliocolic more common in children leading point is lymph node, managed by radiological reduction // colocolic is more common in adults, leading point to polyp, Meckel's diverticulum, cancer, managed by surgical correction)



✨ On physical examination: Auscultation (high pitched if acute obstruction // absent if perforation or ischemia)

🌸 Modality of choice CT scan with oral and IV contrast highly sensitive and specific (oral is diagnostic and therapeutic (in adhesive bowel obstruction) without ischemia or perforation (stable))

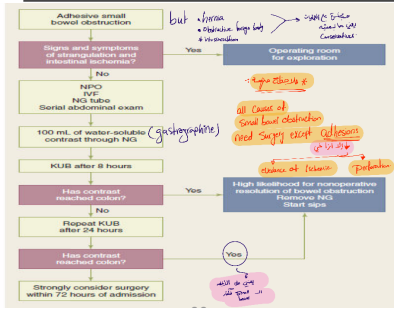


✨ abdominal x-ray two views supine (الافضل) and standing

✨ How to differentiate between a small and large bowel on x-ray? Small bowel (centrally located + step ladder appearance (if complete plica circularis so it's jejunum if it's featureless so it's ileum)) large bowel (peripheral located, incomplete haustrations)

🌸 All causes of a small bowel obstruction need surgery except adhesions unless

complications or evidence of ischemia or perforation



Indication for surgical management

- IO with peritonitis
- Intestinal ischemia, perforation, pneumatosis
- Closed loop obstruction
- Complicated sigmoid volvulus + cecal volvulus (always + when CT shows CT haustrum)
- Failure of conservative management like adhesions
- Post op (if you suspect a technical problem as a cause of the obstruction).
- any type of obstructed hernia or irreducible

Paralytic ileus:

- Adynamic obstruction secondary to neuromuscular failure, colicky pain is not a feature
- Most common Cause is hypokalemia
- CT scan is the most effective investigation
- The need for laparotomy become increasingly likely the longer the bowel inactivity (>7days)

Ileus: common etiologies	
Abdominal surgery	
Infection	
Sepsis	
Intra-abdominal abscess	
Peritonitis	
Pneumonia	
Electrolyte abnormalities	
Hypokalemia	
Hypomagnesemia	
Hyperkalemia	
Hypnatremia	
Medications	
Anticholinergics	
Opiates	
Phenothiazines	
Calcium channel blockers	
Tricyclic antidepressants	
Hypothyroidism	
Ureteral colic	
Retroperitoneal hemorrhage	
Spinal cord injury	
Myocardial infarction	
Mesenteric ischemia	

Small bowel neoplasms:

Adenocarcinoma:

- Mostly in proximal (40% in duodenum) small Bowel (عكس التيومرز الي رح اذكرهم تحت)
- Most common malignant neoplasm in small bowel
- Most common risk factor is villous adenoma
- Usually symptomatic (abdominal pain, bowel obstruction, and weight loss)
- Gold standard diagnosis is CT scan and endoscope

Management:

- if it's in perianbulary area do Whipple procedure
- if it's in the distal duodenum /proximal jejunum do resection-anastomosis
- LN invasion tendency (so lymphadenectomy) عكس GISTs
- Post-op chemotherapy

Leiomyoma:

- Is the most common benign neoplasm of a small intestine arises from mesenchymal cells grows submucosally

GISTs tumor :

- Arise from mesodermal derived components
- Equally distributed

✨ Cause bleeding obstruction

✨ Grow extraluminally

🌸 Mutations of c-kit (tyrosine kinase , CD117)

✨ Managed by: wide en bloc resection

🌸 Chemo/radiation therapy is NOT effective

we use imatinib (gleevec) inhibit overactive tyrosine receptors

Lymphoma:

🌸 Non Hodgkin B-cell lymphoma

✨ Mostly in ileum

✨ May arise from preexisting systemic condition such as celiac disease, CD, or immunosuppression (iatrogenic, HIV) or de-novo

✨ Treatment based on the stage , usually bowel resection and chemotherapy.

Neuroendocrine tumors(NET):

✨ arise from enterochromaffin cells of intestinal crypts

✨ Mostly occur within 2 feet of ileocecal valve

✨ Aggressive

✨ pts typically asymptomatic until advanced ds

🌸 Carsinoid syndrome: bronchospasm , flushing, diarrhea , right side heart failure (هاي السيندروم)

بتكون نتيجة الهرمونات اللي (بفرزها الورم)

DIAGNOSIS

* URINALYSIS

↳ ↑ 5-HYDROXYINDOLEACETIC ACID

* BLOOD TESTS

↳ NIACIN DEFICIENCY

* MEDICAL IMAGING

↳ CT/MRI SCAN

↳ OCTREOSCAN /GALLIUM 68 PET SCAN + Chromogr

More accurate ↓

🌸 Management: symptomatic PTs receive Octreotide(somatostatin analogue) or lanreotide in advanced UN resectable tumor

1. A 29-year-old male presents to the emergency department with complaints of abdominal pain, nausea, and bilious vomiting for 2 days. He has no significant past medical history, and his past surgical history is significant for an open appendectomy for perforated appendicitis. CT scan demonstrates dilated loops of small bowel with a transition point in the right lower quadrant and is negative for free air or fluid. The most likely etiology for this patient's condition is:

- a. Intussusception
- b. Malignancy
- c. Adhesions
- d. Crohn disease
- e. Gallstone ileus

1. Answer: c. The most common cause of SBO in a patient who has had a prior abdominal operation is adhesions.

3. A 70-year-old male presents to the emergency department with abdominal pain, nausea, and bilious vomiting. He also complains of a painful bulge in his left groin that has been present for 4 hours. His past medical history is significant for hypertension, chronic obstructive pulmonary disease, and hypothyroidism. He has no past surgical history. His initial vitals in the emergency room are: Temperature 37.5°C, heart rate 80, blood pressure 165/90, respirations 14, O₂ saturation 93% on room air. On physical examination, he is moderately distended, and has mild tenderness to palpation throughout his abdomen, and a firm, painful bulge in his left groin above the inguinal ligament. There are no overlying skin changes in his groin. You start IV fluid resuscitation. The next best step in the treatment of this patient would be:

- a. Attempt manual reduction in the ED with light sedation
- b. Obtain a CT scan of the abdomen
- c. Discharge the patient with a follow-up appointment in 1 week
- d. Urgent laparotomy
- e. Elective inguinal hernia repair

4. A 60-year-old female presents to the emergency room with signs and symptoms of bowel obstruction. On CT scan, a mass is visualized in the jejunum with dilation of the small bowel proximal to the mass and several lesions in the liver concerning for metastasis. You perform a laparotomy and segmental bowel resection and core biopsy of a liver lesion. Final pathology reveals cells that are c-kit positive. Which of the following is the best chemotherapeutic regimen for this patient?

- a. Imatinib mesylate (Gleevec)
- b. 5-FU and oxaliplatin
- c. Cyclophosphamide + doxorubicin + vincristine + prednisone

2. A 45-year-old male presents to the emergency department with complaints of abdominal pain, nausea, and bilious vomiting for 2 days. His last bowel movement was 3 days ago. His past medical history is significant for hypertension and diabetes, and his past surgical history is significant for an open appendectomy for perforated appendicitis and open ventral hernia repair. His initial vitals in the emergency room are: Temperature 39°C, heart rate 115, blood pressure 90/54, respirations 22, O₂ saturation 92% on room air. On physical examination, he has a well-healed lower midline incision, abdomen is firm, moderately distended, and has diffuse tenderness to palpation of his abdomen with rebound and guarding. CT scan demonstrates dilated loops of small bowel with a transition point in the right lower quadrant and a moderate amount of free fluid in the pelvis. You place an NG tube and begin IV fluid resuscitation. The next best step in the treatment of this patient would be:

- a. Admission for close monitoring
- b. Urgent laparotomy**

examination. Patients who are unstable or have diffuse peritonitis should be taken emergently to the operating room and are not candidates for nonoperative management.

5. A 45-year-old male with widely metastatic small-bowel neuroendocrine tumor has symptoms of flushing and diarrhea. Which of the following drugs would be useful to control his symptoms?

- a. 5-FU and oxaliplatin
- b. Sunitinib malate (Sutent)
- c. Octreotide**
- d. Tincture of opium
- e. Diphenoxylate hydrochloride and atropine

6. A 10-year-old girl with short-bowel syndrome secondary to congenital malrotation and volvulus presents to the emergency department with fevers of 39.5°C, tachycardia, and hypotension. She receives TPN via a tunneled central venous catheter. Her physical examination is unremarkable. WBC is 12. Chest x-ray demonstrates her central line, and abdominal plain films demonstrate a normal gas pattern, no free air. The most likely acute diagnosis for this patient is:

- a. Hyperthyroidism
- b. Central venous catheter–associated blood stream infection**
- c. Intra-abdominal abscess
- d. Pneumonia
- e. Small-bowel perforation

6. Answer: b. Central venous catheter-related complications are common in patients who are on long-term TPN. The main long-term complications of central venous catheters include blood stream infections, catheter-induced venous thrombosis, and catheter-related venous stenosis.