Surgery – Abdominal Conditions

Hx and Ex of "Abdominal Symptom"

A. Overview:

- **Obstruction** can be characterized as either partial or complete versus simple or strangulated "urgent surgery is required". Abdominal pain, often described as crampy and intermittent, is more prevalent in simple obstruction (Medscape).
- **The clinician must always attempt to answer these three questions:**
    1. Is there intestinal obstruction?
    2. Is the bowel strangulated?
    3. Is the site of the obstruction in the small bowel or large bowel?
- **The signs of strangulation** are pain, tenderness, guarding and rebound tenderness.
- **The cardinal symptoms of intestinal obstruction** are pain, vomiting, distension and absolute constipation, but the severity and time of onset of each of these symptoms depend upon the level of obstruction. (Browse's – 4th edit.).

B. Differential diagnosis:

DDx	What support this diagnosis?
"GI System"	
Abdominal Adhesions	Risk factors: from previous abdominal surgery (most common cause). Typical Symptoms: abdominal discomfort around the belly button that is cramp-like followed by distention of the abdomen. Complication: intestinal obstruction, chronic pelvic pain.
Hernias	Risk factors: congenital defects, loss of tissue strength, operative trauma, increased intra-abdominal pressure e.g. coughing, straining… Typical Symptoms: swelling, may or not associated with pain. Complication: inflammation, obstruction of intestinal lumen, strangulation.
IBD (Crohn's disease)	Risk factors: combination of environmental, immune and bacterial factors in genetically susceptible individuals. Typical Symptoms: crampy abdominal pain, diarrhea, weight loss. Complication: stricture, phlegmons & abscesses, fistulas.
Appendicitis	Risk factors: --- Typical Symptoms: anorexia and periumbilical pain followed by nausea, right lower quadrant (RLQ) pain, and vomiting. Complication: peritonitis, abscess.
Diverticulitis	Risk factors: low-fiber diet, constipation, and obesity. Typical Symptoms: Left lower quadrant pain, nausea and vomiting, constipation, diarrhea, flatulence, bloating. Complication: obstruction of colonic lumen, fistula.
Carcinoma	Risk factors: IBD, genetics. Typical Symptoms: bleeding in stool, changes in bowel habits (more loose), colicky lower abdominal pain. Complication: intestinal obstruction.

C. Questions to ask the patient with this presentation

Questions	What you think about … !
Onset of the symptoms (see the table in section D)	
Which symptom appears first, followed by which?	It helps to determine the level of bowel obstruction.
For how long each symptom?	--
Pain: - Site. - Onset. - Constant or intermittent. - Character of pain (cramps, stabbing…)	Section D "the table"
Vomiting: - Volume (small or large amount). - Content: (acid, bile…). - Associated odor.	Section D "the table"
Constipation: - Bowel habits. - Onset of constipation.	Section D "the table"
Flatus: - Ask if the patient passes gases.	Section D "the table"
Constitutional symptoms	Fever, fatigue, sweating, changes in weight, and changes in appetite.
Past History	
Ask about IBD, GI tumors (and other chronic GI conditions).	--
Did you have previous abdominal surgery?	Since abdominal surgery causes adhesive obstruction.
Previous abdominal trauma	--
Diet (low fiber)	It causes constipation.
Previous history of changes in bowel habit	--
Bleeding per rectum	It suggests carcinoma.
Hernias: - Swelling. - Site. - Reduction.	Hernias can cause bowel obstruction.
Medication / blood transfusion	
Social History	
Smoking	Can cause cancer.
Family History	
Colon cancer.	

D. Review of symptoms related to the system of interest.

Differentiating the level of bowel obstruction		
Symptom	Gastric or proximal small bowel obstruction	Distal small bowel or large bowel obstruction
Pain	• Early symptom. • Central (peri-umbilical). • Short intermittent cramps.	• Late symptom. • Localized in the lower third of abdomen. • Long intervals between cramps.
Vomiting	• Develops early. • With pyloric obstruction, the vomitus is watery and acid. • High small bowel obstruction produces a bile-stained vomit. • Large amounts. • No or little odor.	• Develops later. • Obstruction in the lower part of the small bowel is associated with a brown vomit with foul smelling (feculent vomit). • Small volumes. • Foul odor. • Vomiting is unusual.
Abdominal distension (the lower the site of the obstruction, the more bowel there is available to distend)	Usually not associated with distension.	Distension is around the periphery of the abdomen. If small bowel obstruction is present, distension will be in the center.
Absolute constipation (neither feces nor flatus are passed)	This occurs late in high small bowel obstructions.	• Once an obstruction is complete and the bowel below is empty, absolute constipation develops. • This occurs early in lower large bowel obstructions.

E. Systemic Review Go to Medicine – Hx – "General" topic!

Physical Examination

A. Start the examination with:

Position: supine position.

Exposure: ideally, patients should be uncovered from nipples to knees (mid thighs). Many find this embarrassing and a compromise is to cover the lower abdomen with a sheet or blanket while palpating the abdomen, but never forget to examine the genitalia and the hernial orifices.

Getting the patient to relax:

Ask the patient to rest head on the pillow to avoid tensing the rectus abdominis muscles.

- Ask the patient to place their arms by their sides, not behind their head.
- Encourage the patient to sink their back into the couch and breathe regularly & slowly.
- Only press your hands into the abdomen during expiration as the abdominal muscles relax.

Inspection:

Abdominal movement: symmetrical with respiration (normal).

Abdominal swellings: Organomegaly, tumors, or hernias.

Distension: it indicates **intestinal obstruction**, ascites.

Scars: relevant previous illness, **adhesions**.

Visible peristalsis: **intestinal obstruction.**

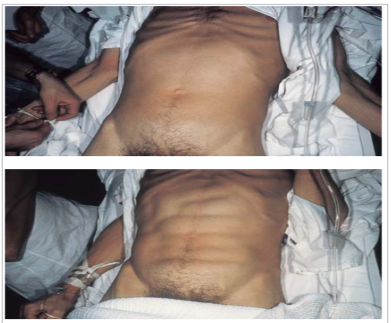

FIG 15.14 Visible peristalsis in a patient with a low small bowel obstruction. **Top:** mild abdominal distension, surface of abdomen smooth. **Bottom:** the abdomen 5 minutes later – visible loops of peristalting small bowel.

Cough impulse: Ask the patient to cough then comment either positive (there is a bulge) or negative cough impulse (no bulge). If negative, you may ask the patient to stand up to make sure (if negative, move to cough impulse under palpation).

- **Before palpation, ask the patient if any particular area is tender then examine this area last.**

Palpation: ALWAYS look to the patient's face when palpation.

Superficial: looking for tenderness/guarding and rigidity.

Cough impulse: put your hand on patient's umbilicus and inguinal regions and on each time you ask the patient to cough. Then comment either +ve or –ve.

Rebound tenderness: compress any region in the abdomen then remove your hand quickly. Positive rebound tenderness means there is tenderness. You do this only to make sure there is no pain so you can proceed to deep palpation.

Deep: looking for deep tenderness, organomegaly, and presence of any masses.

Keep in mind palpation of the organs: the liver, spleen, kidneys and urinary bladder.

Percussion:

Tympanic sound: the normal abdomen is universally tympanic because of the presence of gas-containing bowel. It also indicates intestinal obstruction.

Dullness: normally the liver is dull to percussion and suprapubic dullness may indicate a full urinary bladder. It is also heard if there is an underlying mass.

Shifting dullness: the site of the dullness moves as the patient rolls onto his/her side.

Succession splash: If a part or the whole of the abdomen is distended, the patient should be held at the hips and the abdomen shaken from side to side. Splashing sounds indicate that there is an intra-abdominal viscus, usually the stomach, distended with a mixture of fluid and gas.

Auscultation:

Bowel sounds: you need to comment on both **frequency** and **pitch**.
Vascular bruits: for vascular disease.

Bowel sounds	Normal/ abnormal	Description of the sound	The condition
Present	Normal	Gurgling noises, low-pitched and occur every few seconds.	The bowel contains a mixture of fluid and gas.
	Abnormal (Hyperactive bowel sound)	High volume, pitch and frequency of the bowel sounds (tinkling sounds).	Increased peristalsis as in mechanical obstruction or gastroenteritis.
Absent	Abnormal (Hypoactive bowel sound)	The sound is absent over 30-second period.	Peristalsis has stopped, a condition termed **ileus**. This may be due to generalized peritonitis or prolonged period of obstruction.

B. End the examination with: (to complete my Ex)

Digital rectal examination: it focuses on identifying rectal pathology that may be causing the obstruction and determining the contents of the rectal vault.

- Hard stools suggest impaction; soft stools suggest obstipation.
- An empty vault suggests obstruction proximal to the level that the examining finger can reach.
- Fecal occult blood testing (FOBT) should be performed. A positive result may suggest the possibility of a more proximal neoplasm.

Hernial orifices: the inguinal and femoral regions should be an integral part of the examination especially in a patient with suspected large-bowel obstruction.

External genitalia.

Interpretation of Abnormal findings

Abnormality	Indicates
Abdominal distension	It indicates intestinal obstruction.
Scars	Adhesions.
Hernia	Intestinal obstruction.
Visible peristalsis	Intestinal obstruction.
Tympanic sound	Intestinal obstruction.
Hyperactive bowel sounds	Occur early as GI contents attempt to overcome the intestinal obstruction.
Hypoactive bowel sounds (quiet)	Occur late (ileus).

432 OSCE TEAM

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