

History Taking: Abdominal Pain

The classic clinical picture of SBO includes abdominal pain which begins as crampy and may progress to constant, accompanied by nausea and vomiting, abdominal distension, and an altered pattern of flatus or bowel movements. However, the symptoms can vary widely depending on the location and degree of obstruction. Therefore, it is important to obtain a detailed history and physical exam. Below are some important considerations when taking a history of abdominal pain and suspected bowel obstruction.

- **Age:** It is helpful to consider the patient's age, as the incidence of some diseases may be limited to particular ages. A stricturing colon cancer would be an unlikely cause of obstruction in patients under 40 years of age, while intussusception generally occurs in infants younger than 2 years old.
- **Onset/Duration:** Patient's will usually be able to pinpoint the time when the pain started and circumstances surrounding the development of pain. The pattern and progression of pain can also be an indication of the severity of the disease process. Intestinal obstruction is often gradual in onset. Appropriate questions include: *When did the pain begin? What were you doing when the pain began? How severe was the pain when it started?*
- **Localization:** Think anatomically when localizing pain, using constant anatomical landmarks, such as the distribution of the spinal nerves and voluntary abdominal musculature. Bowel obstruction may present with diffuse abdominal pain or pain referred to the epigastric or umbilical region; however, more precisely localized pain may indicate strangulation or inflammation irritating the overlying peritoneum. Targeted questions include: *Can you show me on where your pain is? Instruct the patient to point to where on their body they feel the pain.*
- **Character/Intensity:** The character and intensity of the pain that the patient describes often helps indicate the nature or severity of the illness. In bowel obstruction the pain is often severe from the outset, coming in bouts or spasms as peristalsis tries to overcome the obstruction. The periodicity of the cramps in large bowel obstruction tends to be longer (8-10 minutes) than small bowel obstruction (2-3 minutes), as the timing of peristaltic waves is different. Generally, the higher in the gut the obstruction occurs, the more severe the associated pain. Constant pain is an ominous sign and may indicate that the obstruction has progressed to bowel ischemia. Consider asking the patient: *Can you describe your pain (sharp, dull, aching, gnawing)? Does the pain come and go or is it constant? How often are you feeling this pain? Have the patient rate their pain on a scale of 1-10, 10 being the worst pain a person could feel.*
- **Radiation:** Can be diagnostic, especially with colic, as the pain is referred to the dermatome distribution correlating with the spinal nerve that innervates the involved bowel segment. Acute changes in the location of the pain can reflect changes in the disease process and clinical status of the patient. For example a change from diffuse colicky abdominal pain to sharp, constant localized pain could signify strangulation, a surgical emergency. Questions to ask: *Do you feel the pain move anywhere else? Has your pain changed or moved from its original location?*

Categories of abdominal pain:

Visceral pain: Pain associated with hollow abdominal organs (i.e. small and large intestine, biliary tree) when they are stretched or distended or contract forcefully against resistance; for example strong contraction of a distended gallbladder against an obstructing gallstone. Typically, the pain associated with local distension or vigorous contraction of a hollow organ is called colic, and severe colic almost always indicates obstruction. Colic occurs in paroxysms, is often severe in nature, and is referred to the midline, corresponding to the distribution of the same

spinal cord level as the sympathetic nerves that supply the affected organ, making localization difficult. Small intestine colic is often referred to the epigastric and umbilical regions, whereas large bowel colic is usually referred to the hypogastric/suprapubic area. Visceral pain may also be associated with stretching of the capsule surrounding a solid organ, such as liver distension against its capsule with acute hepatitis.

Parietal pain: Parietal pain is caused by inflammation and arises from the parietal peritoneum. This pain is usually steady and aching in character, usually of greater severity than visceral pain, and may be useful to more precisely localize the involved structure. Movement can aggravate parietal pain, so the patient may try to lie completely still, and a bump of the gurney can be excruciating.

Referred Pain: Referred pain is felt in sites distant from the abdominal pathology, in areas that are innervated by approximately the same spinal levels as the involved structure. This pain develops as the initial pain progresses, making it appear to radiate or travel from the initial site. Pain may also be referred to the abdomen from the chest, spine, or pelvis, further complicating the assessment and diagnosis of abdominal pain.

- Associated Symptoms:
- **Vomiting** – Vomiting is generally a constant feature of small bowel obstruction. The vomiting associated with abdominal pain is almost always related to either severe irritation of the nerves of the peritoneum or mesentery, or obstruction of an involuntary muscular tube. Obstruction of a muscular tube causes peristaltic contraction with subsequent stretching of the muscular wall, which can be a strong stimulus for vomiting. Additionally, in mechanical bowel obstruction, intestinal contents are prevented from passing, which can result in reverse movement and antiperistalsis. Note the timing of the vomiting in relation to abdominal pain: cramping pain begins first, and then later in the course as the enteric contents back up vomiting will occur. Also in intestinal obstruction, the timing may give an indication of how proximal in the intestine the obstruction is occurring. Generally, the more proximal the occlusion, the earlier the onset of vomiting. Vomiting may be absent in large bowel obstruction. The character of the vomit may also indicate the level of obstruction: pre-pyloric obstruction causes expulsion of stomach contents, while post-pyloric obstruction should include bile, and feculent vomit is pathognomonic of obstruction of the distal small intestine. Important questions to ask: *Have you been vomiting? Can you describe the appearance of the vomit?*
- **Nausea and loss of appetite/anorexia** – The same stimulus that causes vomiting, can also cause nausea and loss of appetite. Nausea and vomiting are classically part of the clinical picture in SBO. An acute loss of appetite is always significant. In a child especially this warrants a careful examination for appendicitis. Questions may include: *Have you noticed any changes in you appetite? Are you feeling nauseous? (Child) If I had you favorite food right now, would you be able to eat it?*
- **Change in bowel habits:** constipation, diarrhea, and obstipation (lack of passage of bowel gas/flatus), change in the caliber of stool (“pencil thin stools”)
 - To note change in bowel habits, it is important to ask what is normal for a patient. For example, if constipation is the patient’s baseline, then cessation will be less significant in this patient than in a typically regular individual.
 - Profuse watery diarrhea commonly accompanies a partial small bowel obstruction, often without the passage of flatus
 - Presence of blood or mucus in the stool should also be noted

- Questions to ask: *Have you noticed a change in your normal bowel habits? Have you had diarrhea or constipation? How often to you normally have bowel movements (daily, weekly)? Are you passing gas normally? Have you noted any blood or mucus in your stool?*
- **Pain that has become constant:** strangulation is an important consideration, suggested by symptoms and signs of peritonitis, large fluid shifts, or systemic toxicity/SIRS
 - Classic tetrad of strangulated bowel: leukocytosis, fever, tachycardia, and severe constant abdominal pain
 - Physical exam: abdominal tenderness, involuntary guarding localized to area of obstruction
 - Other signs: decreased urine output
- **Pertinent Positives**
 - A personal history of SBO
 - Previous abdominal surgery
 - History of known hernia
 - Patient has history of gastrointestinal disease, such as diverticulosis, Crohn disease, ulcerative colitis, etc.
 - Pertinent family history, such as a history of small or large bowel cancer in the family
 - Recent unintentional weight loss, especially in an older individual
 - In a female patient ask about the possibility of pregnancy (LMP, regular menstrual cycle) and history of STI's or PID
 - **Pertinent Negatives**
 - Patient has history of normal colonoscopy within the past 5-10 years
 - Female patients: normal last menstrual period (LMP)
 - No history of abdominal surgery