

Large Bowel Obstruction, Ogilvie Syndrome, and Stercoral Colitis: When Is Dilatation Pathologic? How Are These Conditions Managed?

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Pearls and Pitfalls

- 6 cm of dilation in the large intestine or 9 cm in the cecum is considered pathologic.
- Common mechanical causes of large bowel obstruction (LBO) include neoplasm, sigmoid volvulus, and diverticular complications such as stricture or abscess.
- LBO can be associated with electrolyte abnormalities including hypomagnesemia, hypokalemia, and hypercalcemia. It is also associated with hypothyroidism.
- Iatrogenic pharmacologic causes include opiates, anticholinergics, antihistamines, antipsychotics, and tricyclic antidepressants.
- Neostigmine is reserved for colonic pseudo-obstruction with either more than 12 cm of dilation or failure of conservative management.
- Failure of pharmacologic therapies for colonic pseudo-obstruction may require colonoscopy or surgery for decompression.

Large Bowel Obstruction, Ogilvie Syndrome, and Stercoral Colitis: When Is Dilatation Pathologic?

Large bowel obstruction (LBO) is a condition characterized by abdominal distention and failure to pass flatus due to a blockage in the large intestine. Abdominal pain, nausea, vomiting, and constipation are commonly described, though the absence of any of these symptoms does not rule out the diagnosis. In one case series, 41% of patients with

large bowel obstruction had diarrhea [1]. More than half LBOs are related to cancer, but infection, hernia, strictures, and volvulus are other common causes [2]. When no structural abnormality can be found, LBO is termed Ogilvie syndrome or colonic pseudo-obstruction. This condition has multiple etiologies: electrolyte abnormalities, endocrine disorders, neurologic disorders, inflammatory bowel disease such as ulcerative colitis, medications that slow gut motility such as opioids, and anticholinergic medications [3, 4]. As these obstructions progress, increased pressure on the bowel wall may cause edema and inflammation. This condition is known as stercoral colitis, defined as 3 mm or more of bowel wall edema. Stercoral colitis rarely causes ischemia, and perforation occurs ~0.5% of the time [5]. The routine use of antibiotics is not indicated in these conditions; however, when complications develop, antibiotic use and surgical consultation for source control may be warranted.

Dilation of ≥ 6 cm in the large bowel or ≥ 9 cm in the cecum defines LBO [6]. When colonic dilation reaches ≥ 12 cm, risk of colonic perforation significantly increases. Computed tomography is the most useful imaging study, as it may identify the transition point, potential causes, and evidence of perforation. Intravenous contrast aides in identifying bowel wall involvement and/or inflammation [7].

How Are These Conditions Managed?

The treatment of LBO is determined by the etiology. Mechanical causes such as neoplasm or mass generally require surgical intervention. However, cases of pseudo- or functional obstruction often respond well to conservative management, consisting of bowel rest, nasogastric and/or rectal tube decompression, removal of potential causative agents, disimpaction, and tap water enemas [1]. As these conditions generally do not resolve quickly, patients are usually kept in the hospital in either observation or full admission status.

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If conservative treatment of Ogilvie syndrome does not resolve the obstruction within 48 h or if there is severe dilation (greater than 12 cm), neostigmine is indicated. Neostigmine is an acetylcholinesterase inhibitor, which increases acetylcholine levels in the gut and thus stimulates gastrointestinal motility. Two milligrams are administered IV over 5 min, and the patient must be maintained on cardiac monitoring during and for 30 min after delivery [8]. Since neostigmine can cause bradycardia, atropine should be available; however, dosing glycopyrrolate with the neostigmine may reduce this side effect [9]. It is important to avoid neostigmine for structural obstructions, as it may cause perforation. When used appropriately, neostigmine is up to 90% effective. After successful treatment, adding propylene glycol helps prevent recurrence [10, 11]. Colonoscopy with placement of a decompression tube or surgery is sometimes needed if conservative management is not successful or if there is recurrence [12].

Perforation of the colon associated with LBO, Ogilvie syndrome, or stercoral colitis requires surgical management. Even with treatment, mortality rates have been reported as high as 53%, with long segments of dilated bowel (>40 cm) associated with higher mortality. Early diagnosis is paramount [7].

Suggested Resources

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