

ADVANCES IN ENDOSCOPY

Current Developments in Diagnostic and Therapeutic Endoscopy

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Management of Colonic Pseudo-obstruction

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G&H How is colonic pseudo-obstruction symptomatically differentiated from mechanical obstruction?

MS The signs and symptoms of presentation for pseudo-obstruction are very similar to those for a mechanical colonic obstruction. They consist of abdominal distension, which is universal, as well as prevalent abdominal pain. Many patients also report not passing any flatus or stool for several days. Depending on the severity of the condition, patients can also have fever.

G&H Is colonic pseudo-obstruction a problem manifesting exclusively in the inpatient setting?

MS Patients with colonic pseudo-obstruction are almost exclusively inpatients with other serious underlying medical conditions. It is generally very unusual for a patient to present as an outpatient with acute pseudo-obstruction and it should prompt consideration of other conditions.

G&H What are the underlying conditions most commonly associated with pseudo-obstruction?

MS There are many reported associated conditions and underlying diagnoses. Pseudo-obstruction is often seen in postsurgical patients, the most commonly associated surgeries being obstetric, orthopedic, and cardiac. It is also associated with patients who have undergone multiple traumas. With regard to medical conditions, pseudo-obstruction is seen in patients with organ failure who are in the intensive care unit, often with heart, lung, or kid-

ney disease. The common link among all of these patients is that they are bed-bound, immobile, and often receiving medications that adversely affect bowel function, such as narcotics. In addition, coexisting electrolyte disturbances are frequently present, which may contribute to colonic motility disturbance.

G&H Can you describe the pathogenesis of colonic pseudo-obstruction?

MS The underlying pathophysiology of pseudo-obstruction is not quite clear but it is believed to be an imbalance between the parasympathetic and sympathetic innervation to the colon, leading either to a lack of parasympathetic stimulation or a surfeit of sympathetic stimulation. The result is colonic atony or lack of peristalsis.

The end result of this process is one where the proximal colon becomes dilated and distended with stool and gas. If that distension becomes significant, it can lead to ischemic changes and perforation, with high mortality.

G&H What is the standard course of therapy for colonic pseudo-obstruction?

MS Early recognition is the most important factor. Studies have shown that patients with delayed diagnoses have worse outcomes. Often, by the time pseudo-obstruction is recognized, patients have already been distended for several days and are in danger of developing complications of either ischemia or perforation that require surgical intervention. The mortality associated with these complications is 50–60%.

Mechanical obstruction should be ruled out with appropriate radiologic tests, either by contrast enema or computed-tomography scan. Other causes of a dilated colon, such as an infection manifesting as *Clostridium difficile* colitis, can also mimic pseudo-obstruction and should be checked for and ruled out.

Once other causes are eliminated, supportive care can be administered. This consists of eliminating all nourishment by mouth, as well as eliminating any medications that may further retard colonic peristalsis. These medications (narcotics and other anticholinergic agents) are quite common in the intensive care unit. A rectal decompression tube may stimulate peristalsis, as may ambulation of the patient or frequent position changes in those who are bed-bound. Most cases of pseudo-obstruction can be resolved with these methods. Active intervention with medical therapy or colonoscopy is required in only the minority of patients.

G&H What other therapeutic options are available in the event of failure of conservative therapy?

MS The only proven effective medical therapy currently available for pseudo-obstruction is neostigmine, a cholinesterase inhibitor. Neostigmine increases peristalsis in the gut and is the only therapy that has been evaluated in a randomized controlled fashion in acute colonic pseudo-obstruction. Success rates with neostigmine are 80–90%, with a 10% recurrence rate. Generally, it is well-tolerated with a small side effect profile, the most serious potential effect being bradycardia. Therefore, patients on neostigmine require cardiac monitoring while the drug is being given. Neostigmine generally works rapidly and can be given again in the event of partial recurrence. Contraindications to neostigmine are active bronchospasm, uncontrolled cardiac arrhythmias, renal failure, and pregnancy.

If patients cannot take neostigmine because of contraindications or they fail to respond, colonoscopy for decompression is the next available option. Only patients who have failed 24–48 hours of supportive measures, who have colonic distension greater than 12 cm for several days, or who have failed neostigmine therapy should be referred for a colonoscopic procedure. Colonoscopy is not easy to perform in this situation because the bowel is unprepped and sedation with narcotics is minimized, as these agents are being limited to encourage peristalsis. The perforation risk with colonoscopy in this setting is approximately 1–3%, much higher than with any other indication.

Patients who fail standard colonoscopic decompression and have no signs of ischemia or perforation can be considered for percutaneous cecostomy, performed via a radiologic or endoscopic approach. Those with ischemia or perforation are managed surgically, usually with resection. The mortality rate associated with surgery in this setting is very high (30%).

G&H What is the rate of recurrence associated with colonic pseudo-obstruction?

MS Following colonoscopy, recurrence rates for pseudo-obstruction can be as high as 40%, unless a decompressing tube is left in place. If the patient recovers from his or her underlying condition, pseudo-obstruction is generally not a recurring problem.

Suggested Reading

Saunders MD, Kimmey MB. Systematic review: acute colonic pseudo-obstruction. *Aliment Pharmacol Ther.* 2005;22:917-925.

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Berger WL, Sacian K. Sigmoid stiffener for decompression tube placement in colonic pseudo-obstruction. *Endoscopy.* 2000;32:54-57.