

# Mechanical bowel obstruction secondary to fecal impaction with superimposed Ogilvie Syndrome

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Ogilvie's syndrome is a disorder characterized by massive dilation of the colon in the absence of mechanical obstruction. Fecal impaction is typically a disorder of the elderly and results largely from the inability to sense and respond to the presence of stool in the rectum. Both conditions can present with abdominal distension and pain and both can result in colon damage if not decompressed.

A 67 year old male with a past medical history of cerebrovascular accident with left-sided residual weakness presented with abdominal distension, pain and concurrent urosepsis. Abdominal imaging revealed massive colonic dilation superimposed on a fecal impaction. Multiple attempts at mechanical disimpaction and the use of neostigmine returned the stool pattern to normal.

Multiple comorbidities in elderly patients may result in both a delay in recognition and an overlap of disease processes.

**Key words:** Fecal impaction, Ogilvie Syndrome, urosepsis, Colonic ileus

## INTRODUCTION

Ogilvie syndrome is also known as acute colonic pseudo-obstruction (ACPO), or acute colonic ileus. It is characterized by massive dilation of the bowel in the absence of a mechanical obstruction. The precise etiology of ACPO is not known but the risk factors suggest that an antecedent severe illness is a finding. In fact, in a review by Vanek <sup>1</sup> only 5.5% of patients presented without a known associated cause. The most common predisposing conditions were infection, nonoperative trauma, and cardiac disease. The diagnosis requires abdominal imaging which will both rule out structural obstruction and confirm proximal colonic distension. Implementing a management is urgent. Colonic distension can result in ischemia and perforation resulting in a mortality rate which is approximately 15 percent with early appropriate management, compared with 36 to 44 percent in perforated or ischemic bowel <sup>1</sup>.

Fecal impaction is a consequence of constipation and can present with clinical characteristics of ACPO including distension and pain. The diagnosis and treatment include digital rectal exam, imaging and bowel disimpaction by removing the structural obstruction from the rectum. The differential diagnosis includes multiple conditions such as functional disorders, intrinsic colon disease, medications and neuromuscular disorders. We present a 67 year old male with a fecal impaction who developed clinical characteristics of ACPO after becoming septic with a catheter-associated urinary tract infection.

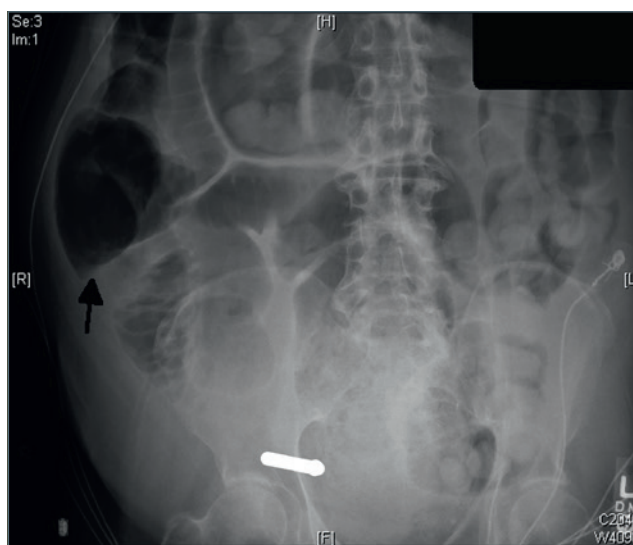
## CASE

A 67-year-old man with a past medical history of cerebrovascular accident with left-sided residual weakness presented to the Emergency Department with

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confusion after a mechanical slip and fall. He had a history of home catheter use for voiding assistance but denied constipation or emesis. On admission his abdomen was slightly distended with positive bowel sounds and his temperature was 38.8 C. Laboratory studies included mild hyponatremia 133 mmol/L, elevated blood urea nitrogen 27 mg/dL and elevated creatinine 1.63 mg/dL, consistent with mild acute kidney injury. Liver function tests, including serum aminotransferases, alkaline phosphatase, bilirubin, and amylase were all within normal limits. His white blood cell count was 22,000. Both urine and blood cultures revealed *Providencia stuartii*, susceptible to third-generation cephalosporins. An upright KUB (Fig. 1) revealed an ileus pattern superimposed on fecal impaction, and a CT without contrast (Fig. 2) revealed a very large fecal impaction distending the rectum with considerable fecal matter and gas behind the impaction throughout the colon and modest distal small bowel stasis. No evidence of mechanical obstruction was visualized other than the impaction but colonic diameter was 11 cm. He was given intravenous antibiotics and nasogastric tube placed. The patient underwent numerous bedside manual disimpactions, enemas, and castor oil without significant improvement. The clinical picture was complicated with persistent abdominal discomfort with any oral intake, inadequate stool output, poor abdominal physical exams, and follow up abdominal XRays worrisome for colonic ileus. When these measures did



**Figure 1.** KUB. There is a moderate amount of gas and a large amount of fecal matter throughout the colon. Large fecal bolus is seen in the rectum secondary to impaction (white arrow). There is some small bowel gas accumulation. Ileus pattern superimposed on fecal impaction would have this appearance. Gas in right hemicolon (black arrow).



**Figure 2.** CT abdomen and pelvis. There is a very large fecal impaction distending the rectum (white arrows). There is considerable fecal matter and gas behind this impaction throughout the colon. There is modest distal small bowel stasis that may be causing partial obstruction of the colon.

not result in meaningful clinical improvement, decompressive colonoscopy was scheduled. However, due to a newly-positive *Clostridium Difficile* Toxin B Gene by polymerase chain reaction test the procedure was delayed. Infectious colitis was not felt to be a precipitating factor, given its timeline later in the hospital course. Treatment for the infection was initiated, at which point the Gastroenterology consult service recommended neostigmine for concern of possible pseudo-obstruction (Ogilvie Syndrome). Constipation and abdominal distention did not improve. Flexible sigmoidoscopy and colonoscopy were eventually attempted but were unsuccessful in removing the impaction. The patient developed overflow incontinence diarrhea and ultimately a manual disimpaction under anesthesia was successful. He developed postoperative fever and was found to have positive blood cultures for *Acinetobacter baumannii* complex. After successful parenteral antibiotic treatment he was discharged to a skilled nursing facility.

## DISCUSSION

This case is unique because of the clinical findings and X-Rays suggesting Ogilvie Syndrome in a case of

clear mechanical colonic obstruction secondary to fecal impaction. The abdominal distension, gas pattern on X-Ray<sup>2,3</sup> and pain are common findings to both disorders and in all likelihood there was a component of both disorders in this patient. Most cases of Ogilvie Syndrome have defined antecedent serious illness<sup>1</sup> and this patient presented with urosepsis. His gas pattern on the abdominal X-Ray flat plate was consistent with a colonic ileus that was clearly right-sided. One element, however that was not consistent with Ogilvie Syndrome was the failed treatment with neostigmine. This pharmacologic approach along with resolving any antecedent underlying illness is typically 90% successful in the treatment of Ogilvie Syndrome<sup>4</sup>. One possible explanation for the failure of neostigmine is the structural obstruction of the fecal mass. Nonetheless, colonic obstruction secondary to fecal impaction was our principal diagnosis with superimposed secondary Ogilvie Syndrome added during the management phase. Constipation and abdominal distention are nonspecific symptoms of fecal impaction<sup>5</sup>. Impaction results when the sensory system cannot alert the individual to a slowly increasing burden of stool in the rectum. This translates to stagnant stool collecting in the vault, impairing passage of newly formed stool. Digital (finger) disimpactions serve as first-line therapy, however warm-water and mineral oil retention enemas may be instituted to facilitate passage of hardened stool. Our patient did not respond to any of these initial therapies. Other forms of therapy include local anesthesia to relax muscles surrounding the anal canal thereby providing a larger lumen diameter for passage of stool, and can be effective when used in conjunction with abdominal massage<sup>6</sup>. If all methods prove to be ineffective, decompressive colonoscopy may be used to fragment and eradicate rock-like stool. Both conditions require

urgent medical attention since both can result in bowel ischemia and subsequent perforation.

In summary, a patient with a fecal impaction resulted in mechanical bowel obstruction. He presented with urosepsis and evidence of colonic ileus. His serious systemic illness probably resulted in a superimposed Ogilvie syndrome which would explain the gas pattern on X-Ray and possibly a component of failed treatment with laxatives. The symptoms of Ogilvie Syndrome mimic those of mechanical obstruction of the colon, but no such physical obstruction is present. Nausea, vomiting, abdominal bloating or swelling and constipation are usually present in a patient with a previous serious illness. The diagnosis is established by abdominal imaging<sup>7</sup>.

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