

Case Report

Acute colonic pseudo-obstruction: Ogilvie syndrome

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ABSTRACT

Colonic pseudo-obstruction (Ogilvie's syndrome) is a functional disorder in which the colon becomes massively dilated in the absence of mechanical obstruction. Pseudoobstruction most commonly occurs in hospitalized patients and is associated with the use of narcotics, bed rest, and comorbid disease. Pseudoobstruction is thought to result from autonomic dysfunction and severe adynamic ileus. The diagnosis is made based on the presence of massive dilatation of the colon (usually predominantly the right and transverse colon) in the absence of a mechanical obstruction.

Keywords: Ogilvie's syndrome, Pseudoobstruction

INTRODUCTION

Acute colonic pseudo-obstruction is a well-known clinical entity also known as Ogilvie syndrome. Sir William Heneage Ogilvie in 1948, described two patients with colonic pseudo-obstruction.¹

Acute colonic pseudo-obstruction is believed to be due to a functional disturbance in colonic motility. Enteric nervous system controls the function of motility in intestine. The exact pathogenesis of Ogilvie syndrome remains unknown. Ogilvie, in his initial theory explained that the acute colonic pseudo-obstruction is due to imbalance in the autonomic nervous system with overactivity of parasympathetic tone leading to dilation of the colon.¹

Recent evidence favours increased sympathetic activity and/or decreased parasympathetic activity leading to adynamic colon.²

Here we report a case of massive abdominal distension, clinically diagnosed as intestinal obstruction. On exploration no mechanical cause of intestinal obstruction found with massive dilation of large intestine.

CASE REPORT

A 72 year old man admitted with complaints of abdominal distension and pain abdomen since last 4 days. Obsolete constipation since last 2 days. Patient also complaints of difficulty in respiration due to abdominal distension. Patient had 2 episodes of bilious vomiting on the day of admission. No history of any chronic illness in past. No episode of previous hospitalizations in the past. On examination patient was conscious, alert, well oriented. Patient had tachypnoea and tachycardia. Blood pressure was within normal limit. Per abdomen examination revealed massive abdominal distension with tympanic note over whole abdomen. Abdomen was tense with minimal tenderness on deep palpitation. No guarding or rigidity found. Per rectal examination suggestive of ballooning of rectum, mild prostate enlargement but no mass lesion felt. Blood examination report shows hemoglobin 10.2 gm%, platelet count 3 lac/cm, total leucocyte count 8200/cm. Renal function test and serum electrolytes were within normal limits. Radiography shows grossly dilated small and large bowel loops. No pneumoperitoneum but elevated both domes of diaphragms. Ultrasound scan shows only grossly dilated bowel loops, no free fluid, no organomegaly. Surgical

procedure was planned for this case with clinical diagnosis of acute intestinal obstruction. On exploring the abdomen we were surprised to see that whole small intestine including duodenum dilated with grossly dilated colon, even rectum was dilated but no identifiable mechanical cause of intestinal obstruction found. Diameter of dilated caecum and sigmoid colon was 12 cm and 15 cm respectively. Decompressing sigmoid colostomy was made as a temporary method which was closed after 2 months successfully. Usually in acute colonic pseudo-obstruction only colon mainly caecum is dilated but in our case whole small and large intestine were dilated in the absence of mechanical obstruction.



Figure 1: Showing massive abdominal distension.



Figure 2: Showing significantly dilated small intestinal loops.

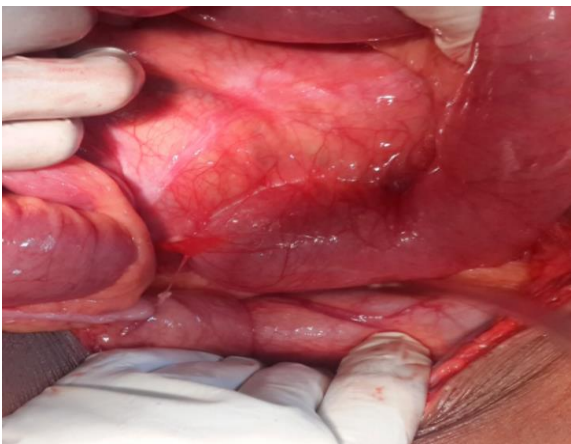


Figure 3: Showing dilated duodenum with duodeno-jejunal junction.

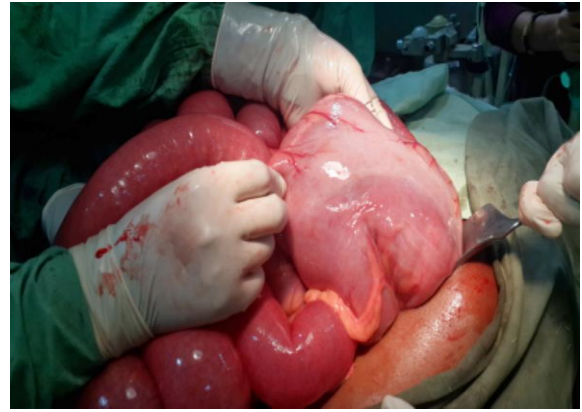


Figure 4: Showing grossly figure dilated sigmoid colon.



Figure 5: Showing grossly dilated caecum with stretched out taenia.

DISCUSSION

Dudley proposed the term “pseudo-obstruction” to define functional obstruction of the colon.^{3,4} Acute colonic pseudo-obstruction commonly presents with features of large intestine obstruction but can have a variable presentation. Elderly patients are more prone for developing Acute Colonic Pseudo-Obstruction (ACPO). In a review by Nanni et al in 1982 the term ACPO appeared in the literature.⁵ Vanek et al. reviewed 400 cases and compiled a list of conditions associated with ACPO: Neurologic events (9%); cardiac events (10%); infection (10%); orthopedic procedure/trauma (18%) and pelvic operations (19%). Other conditions like solid organ transplant, electrolyte imbalance, medications like opioids and antidepressants, connective tissue disorder and debilitated state can also lead to acute colonic pseudo-obstruction.⁶ Acute massive abdominal distension and pain are common symptoms. Constipation, nausea and vomiting are not consistently present. If left untreated, progressive dilation can result in colon mural ischemia, gangrene, perforation and increased mortality. Signs of systemic toxicity appear after complication has occurred. Vanek et al. reported 26% mortality in case with viable bowel, while 36 to 44% with ischemia or perforated bowel. Maximal caecal diameter, age of the patient and delay in colonic decompression increases mortality rate. Along with absolute caecal diameter, the

duration of distension may contribute in prediction of perforation. Saunders et al in their study found higher risk of perforation in cases with duration of distension more than 6 days.⁷ Several studies indicate that caecal perforation is rare with diameter less than 12 cm; caecal perforation occurs more commonly, in upto 23%, when diameter is greater than 14 cm.^{8,9} As features of mechanical and functional obstruction are same, diagnostic imaging for differentiation is required. Mechanical obstruction can be detected by CT-scan and contrast enema. A contrast enema has a specificity and sensitivity of 100% and 80% respectively in the diagnosis of large gut obstruction.¹⁰ Plain radiography can be used to diagnose perforation and serial monitoring of colonic distension. The specificity and sensitivity of CT-scan to diagnose large bowel obstruction is 93% and 96% respectively.¹⁰ Complications like bowel ischemia, perforation and condition of pericolic structures can be diagnose by CT-scan. Proximal colonic dilatation with transitional zone adjacent to splenic flexure is common ct-scan finding in acute colonic pseudo-obstruction. Structural obstructing lesions are not visualized in ACPO as compare to mechanical obstruction.¹¹ Treatment modalities includes decompression via endoscopic or pharmacologic therapy and surgery for the cases with ischemia, peritonitis or acute colonic pseudo-obstruction not resolving on conservative treatment or if the diagnosis is not certain. Our case is unique because of intra-operative finding of grossly dilated large bowel along with whole small bowel dilatation including duodenum which is an extremely rare finding in a case of non-mechanical obstruction.

Summary

ACPO or Ogilvie syndrome is a clinical entity arising with marked abdominal distension without any evidence of mechanical obstruction. Early diagnosis and treatment is important to avoid the perforation of large intestine. Treatment should include an initial conservative measures with nasogastric tube decompression, correction of electrolytes and bowel rest. Medications which can exacerbate the condition, like opioids should be avoided. If there is no improvement after a 24-48 hours period, a trial of neostigmine should be given. In the patients who presents with peritoneal signs or perforation, the appropriate first intervention is surgery.

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