Case report

Acute intestinal pseudo-obstruction (Ogilvie's syndrome): A case report

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A B S T R A C T

Acute colonic pseudo-obstruction, also known as Ogilvie’s syndrome, is an acute clinical condition with clinical and radiological features of an acute large bowel obstruction in the absence of any mechanical cause. Patients presenting with Ogilvie’s syndrome usually have underlying medical and surgical conditions predisposing them to the syndrome. In this article, we describe an elderly patient who presented with acute colonic pseudo-obstruction without any apparent cause.

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1. Introduction

Acute colonic pseudo-obstruction (ACPO) is also known as Ogilvie’s syndrome after Sir Heneage Ogilvie who first reported the condition in 1948.1 It is characterized by massive colonic distension in the absence of mechanical obstruction (80–90%), abdominal pain (80%), abdominal tenderness (62%), nausea and/or vomiting (60%), obstipation (40%), and fever (37%).2 ACPO occurs most often in hospitalized or institutionalized patients with serious underlying medical and surgical conditions and is an important cause of morbidity and mortality. The mortality rate is estimated at 40% when ischemia or perforation occurs.2

A number of underlying causes have been described that predispose to ACPO.3,4 These include systemic illnesses such as post-myocardial infarction or neurological illnesses such as Parkinson’s disease, but are most likely to follow surgical interventions or nonoperative trauma.

A number of medications have also been implicated including antidepressants, antiparkinsonian medication, and opiates. Here we describe a patient with ACPO without any apparent cause. The Hamad Medical Corporation Medical Research Ethics Committee (Doha, Qatar) waived the need for formal ethics approval.

2. Case report

Our patient was a 74-year-old Iranian male who presented to the acute geriatric department with vomiting and abdominal distension of 1 day’s duration. His vomitus was coffee ground in color, non-bilious, and associated with watery diarrhea. The abdominal distension was of sudden onset and was progressive in nature. He also reported a low-grade fever (38°C) for 1 day. The responsible consultant undertook a comprehensive geriatric assessment on the day of admission; the patient was an elderly male of stated age who was not bedridden, took oral feeds, and did not have an indwelling catheter. His body mass index was 27.4 kg/m². There was no evidence of dry skin or pressure sores.

On systemic examination, he was clinically stable except for mild tenderness in the right ileac fossa and increased bowel sounds on auscultation. There was no other significant past or medical history that could have contributed to ACPO. He was only on losartan for his hypertension and did not receive any other medications; thus the possibility of drug-induced adynamic megacolon was ruled out. There was no history to suggest trauma, infections, or other potential cardiac or neurological causes for his abdominal distension.
In view of the history of coffee ground vomitus, we sought a gastroenterology consultation; however, there were no apparent cause. Further, his investigations were noncontributory; three sets of stool occult blood were negative, coagulation parameters were normal, and there were no abnormalities of liver function tests.

In addition, ultrasound of the abdomen revealed no abnormalities. Endoscopy could not be done in view of his acute condition. All baseline investigations were within normal limits. X-ray of the abdomen (erect) revealed marked dilatation (Fig. 1), especially of the right colon. Contrast-enhanced computed tomography of the abdomen revealed a dilated colon with colonic diameter exceeding 9 cm (Fig. 2). There was no evidence of any mechanical obstruction noted. Barium enema was deferred by the radiologist because of the potential risk of colonic perforation due to massive dilatation.

We made a diagnosis of ACPO and decided to manage him conservatively with a combination of bowel rest, nasogastric tube decompression, and rectal tube placement. We also monitored his abdominal girth routinely; the initial measurement was 140 cm. We monitored his electrolytes regularly and picked up hypokalemia on the 3rd day; this was deemed secondary to diarrhea and vomiting as his initial potassium (on admission) was normal.

As the patient did not improve and showed signs of clinical deterioration, we decided to stop conservative management on the 3rd day. At this point he was treated with 2.5 mg neostigmine given intravenously. He made good clinical improvement with a single dose and his abdominal girth reduced to 86 cm within 24 hours. He did not have any further recurrences. While colonoscopic decompression would have been an alternative form of treatment, the same was deferred on the gastroenterologist’s recommendation considering the fact that the patient had a massive dilatation with potential risk of colonic rupture during the procedure. Further evidence suggests that colonoscopy is best reserved in patients for whom conservative measures have failed or when neostigmine is contraindicated.

3. Discussion

Our patient presented with all the classical symptoms of ACPO: abdominal distension, nausea, vomiting, fever, and abdominal tenderness. Interestingly, however, all investigations failed to identify a cause for this manifestation.

Abnormalities of the autonomic nervous system, particularly parasympathetic dysfunction have been used to explain the etiology of ACPO. Although other factors have also been described, the underlying pathophysiology is that of an early motor disturbance followed by complete impairment of peristalsis with progressive bowel dilatation. The condition has been described more often in males, in the elderly, and following surgical interventions (particularly pelvic) and in the context of nonoperative trauma. Radiographic studies are essential in differentiating Ogilvie’s syndrome from other causes of large bowel distension.

Fig. 1. X-ray of the abdomen showing dilated colon.

Flat and upright radiography reveals a massively dilated colon often limited to the cecum and right colon. The most feared complication of Ogilvie’s syndrome is cecal perforation, which is fortunately rare, occurring in only 1–3% of patients.

Patients are usually given a trial of conservative management provided cecal distension is < 12 cm and they are not exhibiting any evidence of ischemic or perforated bowel. This involves bowel rest, nasogastric tube decompression, and rectal tube placement and is usually employed for 48–72 hours. In addition, patients should undergo correction of electrolyte imbalances, discontinuation of narcotics, and treatment of underlying infection.

Successful resolution is achieved in 83–96% of patients within 2–6 days of initiating therapy.

Medical management is commenced when the patient demonstrates clinical deterioration or increasing cecal distension beyond 12 cm. This is usually directed at counteracting the sympathetic–parasympathetic imbalance associated with Ogilvie’s. The best evidence for medical treatment is available for neostigmine. Neostigmine is a reversible acetylcholinesterase inhibitor that indirectly stimulates the muscarinic receptors and enhances colonic motor activity. Neostigmine may be repeated for patients with an incomplete response, patients without a response, or those with a recurrence. If the second dose of neostigmine fails to resolve the cecal dilatation, the patient should proceed to more aggressive measures of decompression. As far as we are aware, there are no contraindications for the use of neostigmine among patients of Iranian descent; in fact a recent study by Aghadavoudi et al. sought to study the effectiveness of neostigmine in Iran in other settings with good outcome.
In conclusion, Ogilvie’s syndrome is still a rare disorder; we are aware of only two other reports from this region.\textsuperscript{11,12} Although the illness typically occurs in the context of some other primary problem, it can also occur without any apparent predisposing cause as in the case of our patient; apart from the fact that he was elderly our patient did not have any other apparent predisposing conditions. Timely recognition is of utmost importance in the assessment and management of patients with ACPO and to avoid and reduce morbidity and mortality.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References