TOTAL COLECTOMY WITH AN END ILEOSTOMY IN OGILVIE’S SYNDROME

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ABSTRACT Introduction: Ogilvie’s syndrome, also known as acute colonic pseudo-obstruction (ACPO), is characterized by massive dilatation of the colon, particularly caecum and right hemi-colon, without any mechanical obstruction. Case report: This is a 50-year-old male patient with a history of chronic diseases including HIV, all under medical treatment and a surgical history of supracondylar amputation 3 weeks ago. He went to the emergency room after presenting the absence of evacuations of 3 weeks of evolution after his hospital discharge due to amputation, accompanied by diffuse, intermittent colic-type abdominal pain, as well as abdominal distension, nausea and vomiting in small quantities. A simple abdominal tomography was performed, with great distention of the right colon (11 cm), transverse colon with abundant gas and distention (10 cm), and descending colon and sigmoid with distention (7 cm) and abundant coprostasis. Medical treatment is started without clinical improvement, presenting greater abdominal pain predominantly on the right and elevated white blood cells, for which colonic perforation is suspected. It is decided to perform exploratory laparotomy with total colectomy and terminal ileostomy. Conclusion: Ogilvie’s syndrome is rare and normally responds to medical treatment; and however, when suspected of perforation or failure of medical treatment, it is decided to perform colonic bypass surgery, such as a colostomy or in some cases hemicolecotomies or total colectomy, depending on of each patient, their comorbidities and their current clinical status.

KEYWORDS Ogilvie’s Syndrome, bowel obstruction, pseudo-colonic obstruction, treatment

Introduction

Ogilvie’s syndrome, also known as acute colonic pseudo-obstruction (ACPO), is a condition characterized by massive dilatation of the colon, particularly caecum and right hemicolon, without any mechanical obstruction [1,2]. The first description was in 1984 by Heneage Ogilvie when he described acute bowel obstruction in the absence of any organic disease of the colon in two patients with large oesophageal hiatus tumours [7].

Case report

This is a 50-year-old male patient with a history of systemic arterial hypertension and diabetes mellitus of 10 years of evolution under medical treatment, as well as HIV for 15 years under medical treatment; Surgical history of spinal instrumentation more than 20 years ago and left supracondylar amputation 3 weeks ago secondary to infectious diabetic foot.

He went to the emergency room after presenting the absence of evacuations of 3 weeks of evolution after his hospital discharge due to amputation, accompanied by diffuse, intermittent colic-type abdominal pain, as well as abdominal distension, nau-
sea and vomiting in small quantities. On physical examination, abdomen with generalized distension with diffuse tenderness, no evidence of peritoneal irritation, underactive peristalsis, dullness on generalized percussion, on digital rectal examination with eutermic nozzle, without palpable tumours and with abundant fecal matter to the soft consistency explorer glove.

Diagnostic protocol is started based on standing and decubitus abdominal radiography with great distention of the transverse colon loop and with coprostasis in the left hemicolon (Image 1). Preoperative studies are performed with slight leukocytosis at the expense of neutrophilia, glucose in ranges greater than 200. It is complemented study with simple abdominal tomography, with great distention of the right colon (11 cm) (Image 2-A), transverse colon with abundant gas and distention (10 cm) (Image 2-B), and descending colon and sigmoid with distention (7 cm) and abundant coprostasis (Image 2-C, D).

Medical treatment is started based on antibiotics, analgesics, hydrotherapy, glycemic control and neostigmine for 48 hrs without clinical improvement, presenting greater abdominal pain predominantly on the right and elevated white blood cells, for which colonic perforation is suspected, and it is decided to perform the exploratory laparotomy.

Surgical technique: Previous surgical protocol, under general anaesthesia in the dorsal decubitus position, supra and infraumbilical laparotomy is performed, the cavity is entered, a large colon distention is found (Image 3-A), meso-sigmoid dissection is performed, placing intestinal clamp at the level of the rectosigmoid junction and performing colon cut, the left colon is released from the told fascia, as well as the splenic angle, the transverse colon and the right colon are released from its hepatic angle and its told fascia, the ileum terminal is clamped and the colon is cut, a total colectomy piece is extracted (Image 3-C) with the presence of ischemic patches and a small perforation in the right hemicolon (Image 3-B), thorough cleaning of the cavity was performed, penrose-type drainage was placed on the left flank and a terminal ileostomy was performed on the right flank (Image 4).

In his postoperative period, with satisfactory evolution, with expenditure per stoma at 24 hours and tolerating the diet in its entirety at 48 hours, for which he was discharged to continue management of comorbidities by outpatient consultation.

Discussion

The exact prevalence of acute colonic pseudo-obstruction is unknown. The highest prevalence is observed in late middle age (60 years), with a slight male predominance (60%) [6].

The most frequent events associated are surgery, cardiorespiratory disease, and nonoperative trauma. Of the surgical precipitants, orthopaedic and obstetric surgical patients seem to be at especially high risk[3]. ACPO occurs in about 1% of patients undergoing orthopaedic procedures like lower limb joint replacement and spinal operations[7]. It affects 0-3% of patients with severe burns[6].

The syndrome has also been being related to severe burns, trauma, spinal anaesthesia, alcohol, respiratory failure, drugs...
(antidepressants, narcotic analgesics, corticosteroids, calcium channel blockers, antipsychotic, narcoleptics and syntocinon), opioid use, electrolyte disturbance, serious infections, CABG, total joint replacement and neurologic disorders[2].

Also, advanced age, immobility, polypharmacy, and medical comorbidities are risk factors [3]. Courses with signs and symptoms of mechanical large bowel obstruction, accompanying colonic dilation that occur in the absence of an organic cause [9].

Most agree that the condition is related to autonomic dysfunction within the gastrointestinal tract, imbalance between the autonomic innervation of the colon with a marked increase in the sympathetic activity and suppression of the parasympathetic activity resulting in colonic dilation that mimics obstruction but without a mechanical obstruction [2,3].

Patients with abdominal pain and distension typically undergo an abdominal X-ray as the initial imaging investigation. Radiographs will reveal a diffusely dilated colon (≥ 6 cm) [3,4].

Abdomino-pelvic CT with intravenous contrast is the standard diagnostic test, with a sensitivity of 96% and a specificity of 93%. It confirms the presence of proximal colonic dilatation and excludes the presence of intrinsic or extrinsic mechanical obstruction [5].

Megacolon usually begins at the level of the cecum and right colon and extends distally up to the point of size incongruence, the so-called “cut-off” or transition point, the actual location of the transition is variable, typically occurring at the splenic flexure, hepatic flexure or the recto-sigmoid junction [5].

One of the most devastating complications is colonic perforation, which has an incidence of 15-20%, with a mortality risk of 40-50% [5]. Caecum perforation, occurring in only 1-3% of patients. Timely recognition is of crucial importance in the initial assessment and management. CT evidence of pneumoperitoneum, free peritoneal fluid or pneumatosis intestinalis involving the distended colon should lead to a strong suspicion of perforation, which demands urgent laparotomy [5].

The risk of perforation increases significantly when the cecal diameter is greater than 9–12 cm. Also, age and delay of more than six days in colonic decompression are considered poor prognosis factor [5,9].

Several possible therapeutic approaches can be considered: conservative treatment, pharmacologic treatment, colonoscopic exsufflation, and surgery. The mortality of patients who undergo surgery varies from 30-50% versus 14-30% for non-operated patients [5]. If the risk of perforation is suspected, a surgical approach is indicated. Otherwise, a non-surgical approach comprising conservative and pharmacological management is adopted [2,4].

The conservative measures should be directed towards eliminating or reducing factors known to contribute to the problem and usually involve correcting electrolyte abnormalities or fluid resuscitation, easing opiates or any antimotility agents, and discontinuing oral intake with or without nasogastric tube decompression [4,5].

Retrospective studies have evaluated the results of conservative treatment with efficacy ranging from 35% to 96% and a risk of colonic perforation of less than 2.5%, and mortality ranging from 0—14%. But, since the risk of perforation for ACPO increases beyond a delay of six days, it should not be continued beyond three days [5].

Medical decompression with neostigmine is regarded as the initial therapy of choice for patients not responding to conservative therapy. This acetylcholinesterase inhibitor causes a large high amplitude of colonic peristalsis and subsequent flatus with bowel movement [4].

Parasympathetic stimulation can cause not only subsequent abdominal discomfort, emesis, and excessive salivation but also profound bradycardia, meaning that a monitored cardiac setting is required [4].

In general, if a patient fails to respond after two doses of neostigmine, colonoscopic decompression is advised [4].

Colonoscopic decompression has been evaluated in several retrospective studies [5]. Successful endoscopic exsufflation has been defined as reducing the cecal diameter by at least 3 cm, the entire procedure required 45—60 minutes, and immediate success varied from 61% to 95%. In contrast, success after repeated procedures were 73% to 88%. The rate of recurrent ACPO may be as high as 40%. The rate of perforation is 2%, and mortality is estimated at 1% [5].

Leaving a rectal tube after the endoscopic decompression is a key manoeuvre to allow for continued decompression and prevent recurrence [3].

Surgery is indicated only when the conservative therapies have failed or when there are clinical or radiologic indications of colonic perforation [5]. There are many surgical options, have been proposed colostomy, total or subtotal colectomy with or without anastomosis [3,5].

The surgeon must evaluate the status of the entire colon before planning the surgical approach. Serosal tears, evidence of ischemia, and perforation sites must be noted. In a poor surgical candidate without perforation or compromise of bowel wall integrity, an ostomy might be the simplest, quickest, and most prudent course of action[3].

Surgical mortality for ACPO has been as high as 30 to 44%[11]. A segmental resection can be considered if the colonic distension and compromised area are limited—the creation of an end ileostomy and Hartmann’s pouch. The decision to perform an anastomosis with or without proximal diversion follows the general principles applicable to bowel surgery[3,9].

**Conclusion**

Ogilvie’s syndrome is rare and normally responds to medical treatment; however, when suspected of perforation or failure of medical treatment, it is decided to perform colonic bypass surgery, such as a colostomy or in some cases hemicolectomies or total colectomy, depending on each patient, their comorbidities and their current clinical status.

**Informed consent**

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Conflicts of interests
The authors have no conflicts of interest to declare.

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