Surgical Treatment is the Initial Step in Treating Ogilvie Syndrome with a Significantly Dilated Cecum

İleri Derecede Dilate Çekum Çapına Sahip Ogilvie Sendromunda Tedavinin İlk Basamağında Cerrahi Tedavi Yeri

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Abstract

Acute colonic pseudo-blockage, also known as Ogilvie syndrome, is characterized by a significant dilatation of the colon due to a loss of function, without the presence of a mechanical obstruction that would impede the transit of intestinal contents. Treatment and diagnosis are challenging. It frequently occurs in patients receiving various pharmacological treatments, hospitalized or living in a nursing home, suffering from a persistent critical illness, or having insufficient mobilization during the postoperative phase. Neostigmine is commonly used in medical treatment for this reason. Conservative treatment is tried for up to three days if the diameter of the cecum is less than 12 cm and there is no perforation-producing peritonitis. It has also been suggested that pyridostigmine and prucalopride therapies are useful. An expert endoscopist can conduct colonoscopic decompression on individuals who do not respond to medicinal treatment. Daily application of polyethylene glycol following treatment lowers the risk of recurrence, if resolution is possible. In contrast, surgical intervention is necessary in cases of colonic ischemia, perforation, or peritonitis. The results of the exploratory process are used to determine the stoma opening and resection width. This article describes a patient whose cecum measured sixteen centimeters, who underwent ileorectal anastomosis following subtotal colectomy, did not respond to decompression, and did not benefit from four days of medical care.

Keywords colonic pseudo-obstruction, Ogilvie's syndrome, ileus, colectomy

Özet

Akut kolonik psödo obstruksiyon (Ogilvie sendromu), intestinal içeriğin geçişine engel olacak mekanik obstrüksiyon olmadan, kolonun fonksiyon kaybı sonucu ileri derecede dilatasyonudur. Teşhis ve tedavisinde zorluk yaşanmaktadır. Sıklıkla hastanede ya da bakımevinde yatan, kronik kritik hastalığı bulunan ya da postoperatif dönemde mobilizasyonu yetersiz, çok sayıda ilaç tedavisi verilen kişilerde görülmektedir. Çekum çapının <12 cm olduğu, peritonite neden olan perforasyonu bulunmayan durumlarda, üç gün kadar konservatif tedavi denenmektedir. Bu amaç için medikal tedavide neostigmin yaygın olarak kullanılmaktadır. Pyridostigmine ve prucalopride tedavilerinin de faydalı olduğu bildirilmektedir. Medikal tedaviye yanıt alınamayan hastalarda, deneyimli endoskopist tarafından kolonoskopik dekompresyon uygulanabilmektedir. Rezolüsyon sağlanabilirse, tedavi sonrasında günlük polyethylene glycol kullanılması rekürrens olasılığını düşürmektedir. Kolonik iskemi, perforasyon ya da peritonit varlığında, cerrahi tedavi endikasyonu oluşmaktadır. Rezeksiyon genişliği ve stoma açılması kararı eksplorasyon bulgularına göre verilmektedir. Biz de bu klinik duruma örnek olması açısından, çekum çapının on altı cm'ye ulaştığı, dört günlük medikal tedaviden fayda görmeyen, dekompresyona yanıt alınamayan ve subtotal kolektomi sonrası ileorektal anastomoz yaptığımız olgumuzu sunmak istedik.

Anahtar kelimeler kolonik psödo-obstrüksiyon, Ogilvie sendromu, dilate kolon, kolektomi

INTRODUCTION

Acute colonic pseudo-obstruction (ACPO) is an uncommon but dangerous condition that results in extensive colon dilatation without the need for mechanical obstruction. William Ogilvie was the first to describe in two cases. In the literature, pseudonyms include colonic ileus, adynamic ileus, and idiopathic colon obstruction. Although its pathogenesis is not fully known. It is typically observed in male patients who are extremely ill or have undergone surgical therapy after the sixth decade. The most closely associated underlying conditions are nonoperative trauma, infection, heart dysfunction, and neurological diseases. Following orthopedic surgery, patients who are immobilized for an extended period have the highest frequency. The high death rate of 6.4% for ACPO (1). Patients with mechanical obstruction, toxic megacolon, fecal impaction, and chronic intestinal pseudo-obstruction are on the differential diagnostic list for patients exhibiting symptoms of ACPO (2). The predominant clinical finding is abdominal distension, which progressively rises over three to seven days before increasing dramatically in the final one to two days. The diameter of the cecum usually reaches ten to twelve cm by the end of the sixth day, which is caused by ischemia brought on by the strain on the colon wall. Thus, perforation is observed. For diagnosis, contrast-enhanced computed tomography (CT) imaging is considered the gold standard (3). There is no mechanical impediment to the extremely dilated colon loop that extends from the cecum to the splenic flexure and occasionally to the rectum.

The initial medication recommended for ACPO is neostigmine, an acetylcholinesterase inhibitor with a parasympathomimetic impact on the gastrointestinal tract. Two milligrams given intravenously every five minutes can result in a decompression rate of 85–94% (4). An expert endoscopist may attempt decompression if the cecum's width is greater than 12 cm and there is no improvement after two to three days of treatment (4). The surgery carries a 1% mortality rate and a 2% risk of perforation (3). Percutaneous endoscopic colostomies of the cecum can be done endoscopically or radiologically in situations where decompression is unsuccessful. It can be opened; thus, if surgery is necessary, a cecostomy or colectomy are possible alternatives for treatment (4).

The patient was referred to the emergency clinic with a preliminary diagnosis of sigmoid colon volvulus, however, further examinations revealed ACPO, and conservative treatment was not helpful.

CASE REPORT

The patient provided informed consent for this case report. A 68-year-old male patient presented with a complaint of being unable to pass gas or stool for four days. He was a twenty-pack-year smoker who was also on calcium channel blockers for critical hypertension. Our patient had peripheral artery disease (Buerger's), who had an amputation. There was evidence of abdominal distension, and a rectal examination revealed that the ampulla recti was empty. Lactate and electrolyte levels were normal. CT imaging revealed significant colon dilatation, with the rectal lumen collapsing and the cecum's diameter reaching about sixteen centimeters (Figure 1).

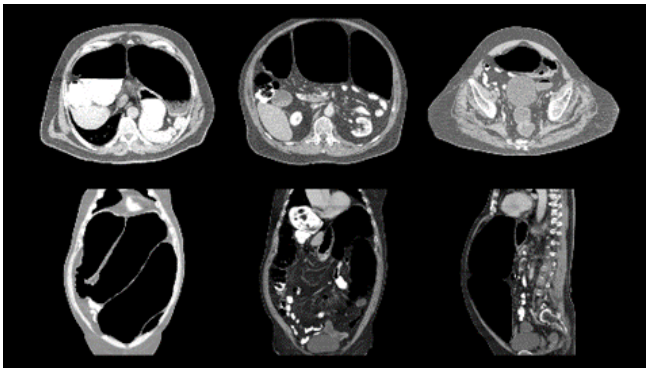

Figure 1. Computed tomography image in which the entire colon is severely dilated, the diameter of the cecum reaches approximately sixteen cm, and the rectum lumen is collapsed. No abnormal features blocking the lumen or impeding intestinal transit were found.

An intravenous neostigmine push of five milligrams was given following the diagnosis of ACPO. Since there was no response, the second five mg neostigmine dose was repeated twenty-four hours later. Because he did not respond to medical treatment, colonoscopy, decompression, and rectal tube insertion were attempted but were unsuccessful. Due to a worsening of the abdomen pain and an increase in the acute phase response, the patient was admitted to the operating room on the third day of treatment and six days after the onset of symptoms. Severe dilation of the colon was noted throughout the laparotomy examination, extending from the cecum to the distal sigmoid colon (Figure 2).

After subtotal colectomy, an ileorectal anastomosis was performed because the dilatation halted at the rectosigmoid junction and the colon diameter expanded significantly (Figure 3). The macroscopic analysis of the colon revealed no intraluminal abnormal features. He had spontaneous gas and defecation, the patient was released on the fourth postoperative day without any problems.

Figure 2. View of the colon during laparotomy exploration

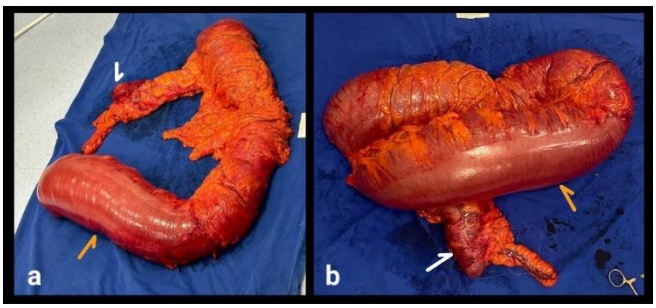

Figure 3. a)Macroscopic view of the piece from the side b) Macroscopic view of the piece from the front. (White arrows: Cecum; orange arrows: Descending colon)

DISCUSSION

ACPO can occur for a variety of reasons. However, the process of its emergence is not completely known. There is an impact on the autonomic nervous system. It is a clinical disorder in which the balance between the parasympathetic system, which excites bowel motions, and the sympathetic system, which inhibits them, is broken in favor of the parasympathetic system, resulting in colon atony. Furthermore, the risk of occurrence increases in patients who have been hospitalized for an extended period, have a severe disease, electrolyte imbalance, or uremia, and are receiving a variety of medicinal treatments. Similarly, our patient with long- term peripheral artery disease, who had an amputation and was unable to mobilize properly, was treated with calcium channel blockers due to hypertension. In addition, he smoked, which might have led to issues with perfusion. There were significant contributing variables for the abrupt onset, quick progression, and loss of colon dilatation and function.

In the review by Sen et al., the conditions included in the differential diagnosis were emphasized (2). In line with the literature, the patient in the current case was a male in his sixth decade who had a recognized serious illness. He did not have gas or feces passing through, and his stomach distension began suddenly and increased progressively. The rectum was empty, there was no volvulus, and there was no mechanical obstruction, according to CT imaging. ACPO was diagnosed after severe dilatation in the segment between the cecum and rectum. A colectomy was performed due to a lack of benefit from medical and endoscopic treatment and severe colon dilatation.

Decompression is the primary goal of ACPO treatment to avoid colon ischemia and perforation. There are few randomized controlled trials and guidelines for comparison of treatment approaches (4-6). According to these guidelines, the diameter of the cecum and the presence or absence of indications of ischemia, perforation, or peritonitis are critical. When there are no indications of peritonitis and the cecum diameter is less than 12 cm, conservative care is the first course of treatment. Neostigmine is utilized in the event of failure or when the cecum diameter is greater than 12 cm. This results in a 40–100% decompression success rate 6. If there is no perforation, ischemia, or peritonitis, colonoscopic decompression is attempted following the second dosage of neostigmine or in situations where neostigmine is not an option. In the presence of perforation, ischemia, and peritonitis, colectomy is performed by opening a stoma when necessary (4,6). In our case, where the cecum diameter was approximately sixteen cm at the time of admission, there were no signs of acute abdomen. Neostigmine treatment according to guidelines was met with no response; colonoscopic decompression were unsuccessful. Due to increased abdominal pain and no regression in colon diameter, surgical intervention was undertaken under emergency conditions. A subtotal colectomy and ileorectal anastomosis were carried out due to significant dilatation in the section between the rectosigmoid junction and cecum; no stoma was opened because there was no peritonitis. We believe that even in the absence of peritonitis, perforation, or ischemia, surgical therapy should be given priority when dealing with such an advanced dilated colon. According to our assessment, colon functions will be negatively impacted even in the case of appropriate decompression. As an outcome to better understand the circumstances in which surgical therapy will be prioritized, prospective randomized controlled studies should be conducted to uncover this situation.

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Ethical Declarations:
Not applicable, because this article does not contain any studies with human or animal subjects.

Informed Consent
An informed consent was obtained from the patient for this case report.

Source of Finance
During this study, no financial or spiritual support was received neither from any pharmaceutical company thathas a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest
No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, shareholding and similar situations in any firm.

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