CASE REPORT

SUCCESSFUL TREATMENT OF ACUTE COLONIC PSEUDO-OBSTUCTION IN AN ELDERLY PATIENT

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SUMMARY

Acute colonic pseudo-obstruction is a syndrome characterized by massive dilation of the colon without mechanical obstruction. It develops in hospitalized patients with serious underlying medical and surgical conditions. We report on such a case that was successfully treated conservatively in our hospital. A 67-year-old man presented to the emergency room with gradual onset of abdominal distension and pain. According to his history, chronic diarrhea related to severe hypokalemia developed after he had received radical proctectomy because of rectal adenocarcinoma 1 year previously. During admission, extreme large-bowel dilatation (to 11 cm, without obstruction) was shown on plain abdominal X-ray and computed tomography. Conservative treatment was given, including nothing by mouth, nasogastric and anal tube decompression, intravenous fluid hydration, nutrition supplementation, and antibiotics. Electrolytes, particularly for hypokalemia, were aggressively corrected. We did not perform neostigmine infusion, decompressive colonoscopy or surgery. The patient recovered smoothly and was discharged. We, therefore, report a case of acute colonic pseudo-obstruction that, through early detection by emergency department clinicians, had an excellent outcome following conservative management only.

Key Words: colonic pseudo-obstruction

Introduction

Intestinal pseudo-obstruction is a condition characterized by clinical features of intestinal obstruction, occurring in the absence of any mechanical obstructing lesion. Pseudo-obstruction can occur in the small bowel or the colon and can be either acute or chronic. Acute colonic pseudo-obstruction (ACPO), also known as Ogilvie syndrome, is the most common form¹. Ogilvie² first described this syndrome in 1948 in association with retroperitoneal malignancy infiltrating the celiac plexus. Dudley et al.³ named the syndrome acute colonic pseudo-obstruction in 1958, in recognition of the fact that the obstruction is functional rather than mechanical. ACPO usually presents in association with underlying medical or surgical disorders and can occur at any age, but occurs more frequently in the elderly. Some clinical reviews have been reported recently⁴, but local data were lacking, with only a few case reports having been published in Taiwan⁵,⁶. Thus, we present a case of successful conservative treatment of ACPO in an elderly male patient.

Case Report

The 67-year-old male patient came to our emergency department with the chief complaints of abdominal distension and diarrhea for 2 days. Tracing back his clinical history, he claimed to have no medical problems such as diabetes, hypertension or other systemic disease. He had received a subtotal Billroth II gastrectomy in 2004 because of a perforated peptic ulcer. A rectal cancer was accidentally found after he received transurethral resection of the prostate for acute urinary retention. The serial workup showed circumferential...
narrowing in the middle rectum. Radical proctectomy was performed on May 16, 2007, and the pathology showed a moderately differentiated, $6 \times 4 \times 4$ cm rectal adenocarcinoma with a positive margin (three of the 18 dissected lymph nodes were positive for metastases). He suffered from chronic diarrhea after the operation but did not continue with follow-up in our hospital. He was admitted to our hospital again in 2008 because of *Aeromonas*, *Salmonella*, infectious colitis and hypokalemia, with a potassium level as low as 1.3–1.4 mEq/L. Ileus had been noted since then (Figure 1).

In October 2008, he came to our emergency unit again because of similar abdominal complaints. Upon arrival, his temperature was 36°C, pulse rate 133/min, and blood pressure 148/84 mmHg. Physical examination revealed a soft but distended and tympanic abdomen with hyperactive bowel sounds. The right upper and left upper quadrants and the epigastric area all showed mild tenderness.

His hemogram showed mild anemia (hemoglobin, 9.3 g/dL) but no leukocytosis (white blood cell count, 7,600/μL). The blood chemistry was as follows: glucose, 98 mg/dL; glutamate oxaloacetate transaminase, 15 IU/L; creatine kinase, 79 IU/L; amylase, 37 IU/L; blood urea nitrogen, 24 mg/dL; creatinine, 1.4 mg/dL; sodium, 140 mEq/L; magnesium, 2.2 mg/dL; and marked hypokalemia with potassium at 1.9 mEq/L. The cause of hypokalemia was surveyed by a transtubular potassium gradient and urine potassium. Lower gastrointestinal loss was judged likely by these laboratory results and history.

Radiographs showed signs of marked colonic dilatation and gas retention in the first hour (Figure 2) that were still present 12 hours later (Figure 3). The computed tomography revealed marked distension on both sides of the colon (with the largest diameter over 11 cm).
and collapse of the rectum (Figure 4). His thoracic imaging was bilaterally atelectatic.

Conservative treatments were successfully applied, including nothing by mouth, nasogastric and anal tube decompression, intravenous fluid hydration, frozen plasma and parenteral nutrition supplement, adequate electrolyte correction (especially for hypokalemia), and appropriate antibiotic use (gentamicin, metronidazole, co-trimoxazole). The final stool culture yielded *Plesiomonas shigelloides* and *Aeromonas* species. Neither decompressive colonoscopy nor surgery was necessary. His clinical condition and the following abdominal plain film (Figure 5) improved considerably, without complications of intestinal perforation, strangulation, or ischemia. He was smoothly discharged from our hospital 2 weeks after admission, with no complication at the time of writing.

**Discussion**

Colonic pseudo-obstruction is a term used to characterize a clinical syndrome with symptoms, signs, and radiographic appearance of a large bowel obstruction without any mechanical cause. According to presentation, pseudo-obstruction syndromes can be subdivided into acute and chronic forms. ACPO is characterized by a massive colonic dilatation in the absence of mechanical obstruction. It can occur at any age but occurs more frequently in late middle age (mean age of 60 years) with a slight male predominance.

The clinical manifestation can develop over a few days, or may arise suddenly. The clinical features of ACPO include abdominal distension, abdominal pain (80%), and nausea and/or vomiting (60%). The first-line diagnostic investigation is plain abdominal radiography, which shows extreme colon dilatation without air–fluid levels of the small intestine.

Treatment of ACPO has often been conservative with supportive care, including nothing by mouth, intravenous hydration, discontinuation of narcotics, sedatives or anticholinergic medications, and avoidance of precipitating factors. In this case, aggressive correction of hypokalemia, appropriate antibiotics for possible pathogens, and early detection of recurrent rectal cancer were the most important. According to Laplace's law and several demonstrations, conservative management is maintained for 72 hours, provided the cecal diameter is less than 12 cm and there are no signs of bowel ischemia, bowel perforation or peritonitis. Neostigmine was the only therapy for ACPO proven to be efficacious in a controlled clinical study, and a recent rapid correction of ACPO with neostigmine in the emergency department had been demonstrated. However, side effects such as bradycardia, hypotension or bronchospasm may be a concern. Metoclopramide primarily affects upper gastrointestinal motility and is not recommended for ACPO. Patients who fail to respond to pharmacologic therapy should undergo decompressive colonoscopy. Surgery is reserved for very ill patients or those with evidence of colonic ischemia or perforation.

![Figure 4. Computed tomography revealed marked distension of both sides of the colon with a maximum diameter over 11 cm.](image)

![Figure 5. Final abdominal radiographic film taken before discharge showing insignificant bowel gas.](image)
In conclusion, the decision to intervene with medical therapy, colonoscopy or surgery is determined by each patient’s clinical status. Early recognition and management to minimize morbidity and mortality are most important.

References