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CASE REPORT

# Insertion of a Decompression Tube to the Proximal Colon under Direct Colonoscopic Visual Guidance in Acute Colonic Pseudo-obstruction

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Acute colonic pseudoobstruction (ACPO) is a medical emergency defined as acute colonic distention without mechanical obstruction or inflammatory status. The initial treatment for ACPO includes conservative therapy and gastrointestinal tube decompression. Colonic endoscopic decompression is indicated in patients who fail to respond to conservative treatment. If none of the above treatments are effective, surgeries such as cecostomy must be considered. We report the case of a 77-year-old man with a history of Parkinson's disease who was receiving anti-Parkinson agent therapy. The patient presented with abdominal distention for 1 week, and ACPO was diagnosed. The patient received conservative treatment after admission; however, the symptoms and imaging findings did not improve. Endoscopic decompression was unsuccessful. Subsequently, we successfully treated the patient with a novel technique by placing a decompression tube into the proximal colon under the guidance of a colonoscope.

Key words: Ogilvie's syndrome, pseudoobstruction, decompression tube

## INTRODUCTION

Acute colonic pseudoobstruction (ACPO), also termed Ogilvie's syndrome, is a medical emergency defined as acute colonic distention without mechanical obstruction or inflammatory status. The risk of colonic perforation is approximately 15%–20% with high morbidity and mortality.[1] The initial treatment for ACPO is conservative medication, correction of electrolyte imbalance, control or avoidance of infection, and avoidance of therapeutic agents that interact with colonic motility.[2] Placement of a nasogastric (NG) tube and rectal tube for decompressing the gastrointestinal (GI) tract are mandatory for those in whom conservative treatment fails.[3] If none of the above treatments are effective, colonic endoscopic decompression and surgery such as cecostomy must be considered.[4] Insertion of a decompression tube to the proximal colon under endoscopy guidance could avoid surgery; this is a novel technique that was first described by Cheong *et al.*[5] However, no related articles have been published since and the success rate and feasibility of this procedure remain unclear. Here, we report a case of ACPO that was successfully treated by placing a decompression tube into the transverse colon under the guidance of a colonoscope.

## CASE REPORT

The patient was a 77-year-old man with a history of Parkinson's disease, orthostatic hypotension, and sinus bradycardia, currently being treated with anti-Parkinson agent

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therapy. The patient presented with abdominal distention and no passage of stool for 1 week. The patient was admitted to the emergency room, where his vital signs, electrolytes, renal function, and white cell count were all within normal range. Physical examination revealed abdominal distension with mild tenderness, no rebound tenderness, and no muscle guarding. Abdominal plain radiography revealed distention of the colon [Figure 1], and abdominal computed tomography (CT) revealed distension of the proximal colon beginning in the splenic flexure without colon tumors or external compression lesions [Figure 2]. The patient was admitted to a standard ward for further treatment. After admission, the patient underwent insertion of the NG tube and rectal tube; however, the patient's symptoms and the plain film did not show significant improvement after 1 week of treatment. We then performed colonoscopic decompression and mild mucosal ischemia of the splenic flexure was seen [Figure 3]. Subsequently, the patient's condition remained unchanged. Then, we placed a decompression tube into the transverse colon under the guidance of the colonoscope [Figure 4], as described previously.[5] The tube was pulled into the proximal colon by grasping with biopsy forceps through the working channel of the colonoscope. Pain during the examination and poor bowel preparation may make the examination process more difficult. The patient's symptoms and plain film rapidly improved. The decompression tube was removed after 3 days, and the patient was discharged in stable condition.

## DISCUSSION

The clinical symptom of ACPO varies and includes abdominal pain, distention, nausea with vomiting, and constipation. Colon distension is typically proximal to the

**Figure 1:** Abdominal plain film at emergency room revealed colon distention

**Figure 2:** Abdominal computed tomography revealed distension of the proximal colon without colon tumors or external compression lesions

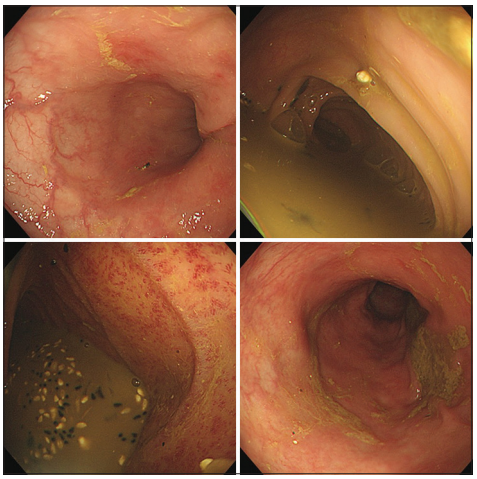

**Figure 3:** Colonoscopy of the transverse colon revealed mild ischemia colitis over the splenic flexure, with no tumor lesion in the observed segment

**Figure 4:** After inserting a decompression tube in the transverse colon, the abdominal plain film revealed significant improvement in the colon distension

splenic flexure. The mechanism of ACPO is unclear, and there are several risk factors, such as electrolyte imbalance, renal failure, major surgery, and medications such as opiates, anti-Parkinson agents, and anticholinergics.[4] In our case, the predisposing factor was likely the use of anti-Parkinson agents. The incidence of ACPO is approximately 0.1%, the mean age is 64–74 years, and most patients have concomitant diseases.[6]

A diagnostic workup is an important initial step in ACPO. Abdominal CT is used to determine if the cause of colonic distension is mechanical obstruction. Measurement of cecal diameter is mandatory, and a cecal diameter >12 cm or dilatation >6 days significantly increases the risk of perforation.[7] Close follow-up physical examination is important for the early detection of colon perforation. The initial therapy for ACPO is conservative and includes correcting the predisposing factor, giving nothing by mouth, providing parenteral nutrition, and conducting NG or rectal tube decompression. If conservative treatment fails, neostigmine therapy or endoscopic decompression is performed. Surgical intervention should be performed for those patients in whom the above treatment strategies fail.[4] In our case, neostigmine therapy was not prescribed because the patient had orthostatic hypotension and sinus bradycardia, which contraindicate neostigmine therapy. In 2020, Cheong *et al.* first described a novel technique of placing a decompression tube into the proximal colon through colonoscope guidance for successful treatment of a 59-year-old woman who had ACPO and did not respond to conservative treatment.[5] Therefore, we performed the new technique in a similar procedure, and the patient was successfully treated without complications. Insertion of a decompression tube into the proximal colon is a practical option for ACPO and prevents the patient from undergoing surgery. Further research is required to prove the feasibility of this method.

## CONCLUSION

The novel technique of placing a decompression tube into the proximal colon under the guidance of a colonoscope can successfully treat ACPO patients who have failed conservative treatment, GI tract decompression, and endoscopic decompression. This procedure can be performed before the patient is considered for surgery.

### Ethical approval

This case report is approved by TSGHIRB, approval number: B202215065, approval date: 2022/03/29.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

### Data availability statement

All data generated or analyzed during this study are included in this published article.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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