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CASE REPORT

Successful Non-Pharmacological Management of Ogilvie's Syndrome in a Young Adult with Intellectual Disability and Chronic Immobility: A Rare Case Report

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ABSTRACT

Ogilvie's syndrome, or acute colonic pseudo-obstruction, is a rare but potentially life-threatening condition characterized by massive colonic dilatation in the absence of mechanical obstruction. It predominantly affects elderly and postoperative patients. Cases in younger individuals who are neurologically impaired remain exceedingly rare. We report a 39-year-old man with severe intellectual disability and lifelong immobility who presented with progressive abdominal distension and no defecation for 72 hours. Computed tomography imaging revealed diffuse colonic dilatation with a cecal diameter of 9.2 cm. Mechanical obstruction was excluded. Due to the unavailability of neostigmine, the patient was managed conservatively using nasogastric decompression, rectal tube placement, and intravenous metoclopramide. Substantial clinical improvement occurred within 24 hours, with the complete resolution of symptoms by day 4. The patient was discharged with a structured bowel regimen and showed no recurrence at early follow-up. Informed consent for publication was obtained from the patient's legal guardians prior to the writing of this case report. This case highlights a rare presentation of Ogilvie's syndrome in a young adult with neurodevelopmental impairment and demonstrates that non-pharmacological conservative treatment may be sufficient in the absence of neostigmine.

Keywords: Ogilvie's syndrome, pseudo-obstruction, colonic dilation, neurodevelopmental disorders, conservative treatment

Introduction

Ogilvie's syndrome, also known as acute colonic pseudo-obstruction, is a rare but potentially life-threatening condition characterized by massive colonic dilation in the absence of mechanical obstruction. It most often occurs in elderly, hospitalized patients with multiple comorbidities, particularly in association with recent surgery, trauma, electrolyte imbalance, or pharmacological triggers such as opioids and anticholinergics.[1,2] The pathophysiology is thought to involve a disruption in the autonomic regulation of colonic motility, leading to unopposed sympathetic inhibition or suppressed parasympathetic activity of the distal colon.[3] Although traditionally described in patients who are older, postoperative, or medically complex, Ogilvie's syndrome may occur in younger individuals with neurological or developmental impairment, where chronic immobility and altered autonomic function may predispose to colonic dysmotility.[2]

Early recognition of Ogilvie's syndrome is critical, as colonic dilation beyond 9-12 cm, especially of the cecum, substantially increases the risk of ischemia and perforation, which are associated with mortality rates as high as 40% in untreated cases.[1,4] Diagnosis relies on clinical evaluation supported by radiologic imaging, whereas management typically includes supportive measures, rectal decompression, and pharmacological intervention, most notably neostigmine, an acetylcholinesterase inhibitor proven effective in resolving colonic distension.[3] Where neostigmine is unavailable, alternative strategies such as rectal tubes, nasogastric suction, and prokinetic agents are employed, although data supporting their use is limited.

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Here, we present an unusual case of Ogilvie's syndrome in a 39-year-old man with severe intellectual disability, in whom the diagnosis was established radiologically and successfully managed without neostigmine or surgical intervention. This case underscores the need to consider Ogilvie's syndrome even in younger, non-verbal patients presenting with colonic distension, especially those with chronic immobility or neurodevelopmental disorders. We believe this case contributes to the limited body of literature by illustrating successful management in a young adult without access to standard pharmacological therapy, emphasizing the feasibility of conservative, non-operative management in resource-limited settings.

Case Report

A 39-year-old man with severe intellectual disability and lifelong immobility was admitted to the emergency department with complaints of progressive abdominal distension and absence of defecation and flatus over the preceding 72 hours. The patient was non-verbal and accompanied by caregivers, who reported decreased oral intake and lethargy. Functional status was severely limited due to a longstanding neurodevelopmental impairment, resulting in complete dependence for mobility and daily care. He had no documented history of chronic constipation, fecal incontinence, or use of laxatives. There was no associated vomiting, fever, or diarrhea. The patient's only known regular medication was oral levetiracetam for seizure prophylaxis. No history of inflammatory bowel disease was reported. A prior intra-abdominal surgical intervention involving the colon had been performed during early childhood, although surgical records were unavailable.

On initial evaluation, the patient was subfebrile (37.8 °C), tachycardic (108 bpm), and normotensive. Abdominal examination revealed marked distension with tympany on percussion and mild diffuse tenderness; there was no guarding or rebound tenderness (Figure 1). Bowel sounds were hypoactive. Digital rectal examination demonstrated a dilated rectum filled with soft fecal material, without palpable masses or evidence of bleeding. Laboratory investigations revealed leukocytosis, with a white blood cell count of 16,400/mm^3, elevated C-reactive protein (64 mg/L), normokalaemia (3.9 mmol/L), and mildly elevated serum creatinine levels (1.3 mg/dL). Serum lactate was measured at 1.61 mmol/L. These findings were consistent with a systemic inflammatory response but without evidence of metabolic acidosis or organ failure.

An upright abdominal radiograph (Figure 2) demonstrated severe colonic distension without evidence of pneumoperitoneum. Contrast-enhanced computed tomography (CT) of the abdomen confirmed diffuse dilatation of the colon from the cecum to the sigmoid colon, with a cecal diameter of approximately 9.2 cm and sigmoid colon dilation measuring approximately 9.0 cm (Figure 3). The rectum was also distended and filled with fecal content. No mechanical obstruction, transition zone, bowel wall thickening, volvulus, ascites, or pneumoperitoneum was observed. The small bowel was of normal caliber. The patient was diagnosed with Ogilvie's syndrome based on clinical and radiologic findings. The differential diagnoses included mechanical obstruction secondary to volvulus or adhesions and paralytic ileus; however, these were

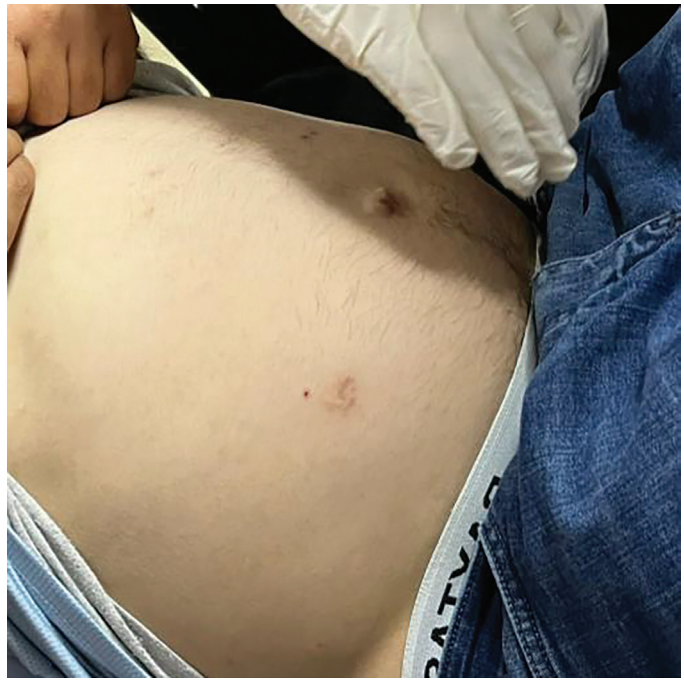

Figure 1. Patient's distended abdomen on arrival

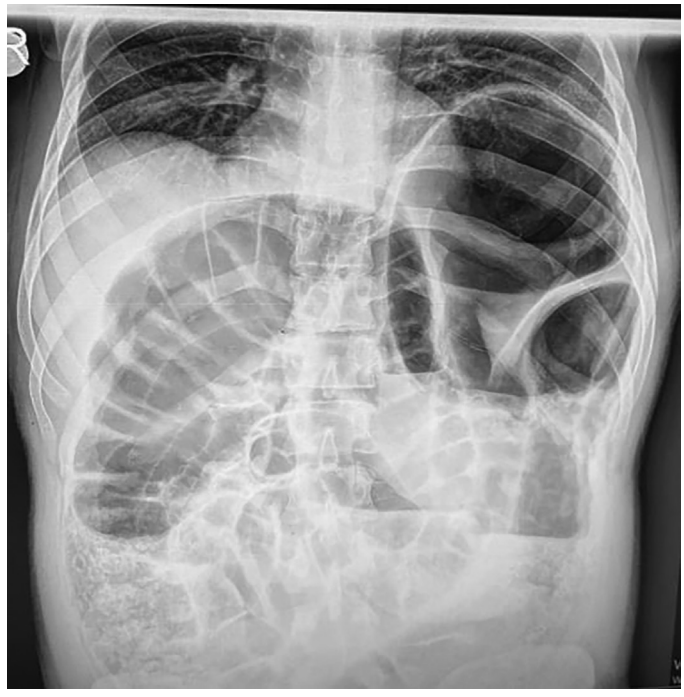

Figure 2. Plain X-ray of the patient

deemed unlikely based on the absence of a transition point or obstructive lesion on contrast-enhanced CT, the standard caliber of the small intestine, and the lack of bowel wall thickening or pneumoperitoneum. Due to the absence of a gastroenterologist at our institution, specialist consultation was not available.

Conservative management was initiated. The patient was kept nil per os, and intravenous fluid resuscitation was commenced. Electrolyte levels were monitored and maintained within normal limits. A nasogastric tube was inserted for proximal decompression, and a rectal tube was placed for distal evacuation. Rectal decompression resulted in a substantial release of gas and liquid feces, with considerable clinical improvement noted within 24 hours. Pharmacological management included intravenous metoclopramide administered at a dose of 10 mg every 8 hours, as neostigmine was unavailable at the facility. Additionally, empirical antibiotic therapy was initiated with 1 g of intravenous ceftriaxone every 12 hours and 500 mg of intravenous metronidazole every 8 hours to cover potential translocation-related enteric pathogens, given the degree of colonic distension and systemic inflammation. Surgical and endoscopic interventions were not required. On day 1, there was notable clinical improvement, accompanied by the resolution of mild tenderness. Clinical improvement continued over the subsequent 48 hours, with normalization of bowel sounds and resolution of abdominal distension. Oral intake was gradually reintroduced and was well tolerated at day 3. The patient was discharged from hospital on day 4 in a stable condition with a structured bowel regimen, including daily oral polyethylene glycol and caregiver instructions on monitoring bowel activity and signs of recurrence (Figure 4). The patient was referred for outpatient colonoscopic evaluation and surgical follow-up. No recurrence of symptoms was noted during early post-discharge follow-up, and the patient was evaluated in a surgical outpatient clinic 15 days post-discharge, with no complaints of abdominal distension or altered bowel habits.

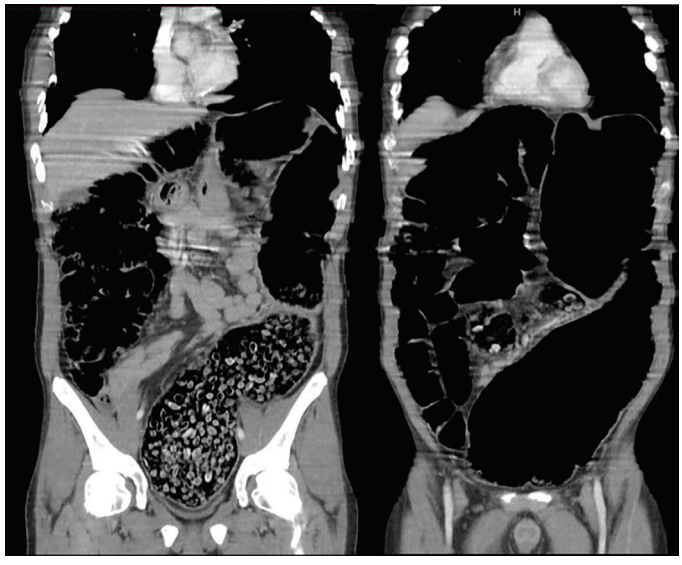

Figure 3. Computerized tomography images of the abdomen

Discussion

Ogilvie's syndrome, or acute colonic pseudo-obstruction, is a rare but potentially life-threatening cause of colonic distension in the absence of a mechanical obstruction.[1] It typically presents in elderly or postoperative patients with multiple comorbidities, particularly those with infections, trauma, or pharmacological triggers such as opioids or anticholinergic agents.[2,5] The underlying pathophysiology involves a functional imbalance in autonomic regulation of the colon, where suppressed

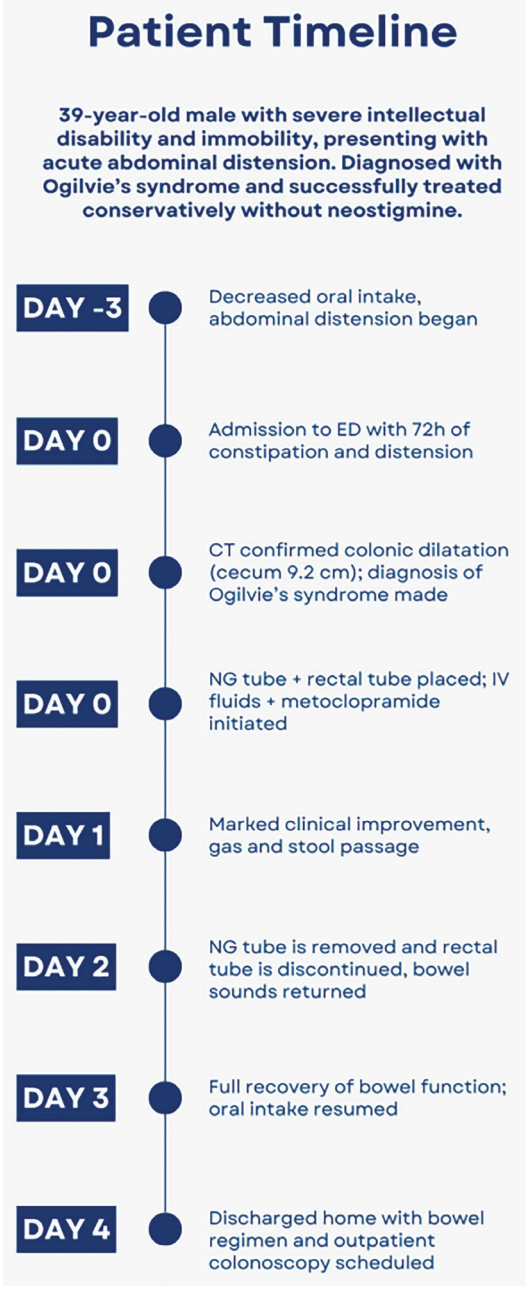

Figure 4. Patient timeline

parasympathetic or excessive sympathetic activity leads to colonic hypomotility.[1,2] Although uncommon in younger populations, Ogilvie's syndrome may occur in individuals who are neurologically impaired or chronically immobilized, where baseline autonomic dysfunction and decreased peristaltic tone can contribute to pseudo-obstruction.[6,7] Our patient -a 39-year-old man with severe intellectual disability and chronic immobility- exemplifies this atypical demographic. The presence of prior abdominal surgery, possibly colonic in nature, introduces an additional but undefined risk factor, although no evidence of mechanical obstruction or adhesions was noted radiologically. An additional challenge in the management of this case was the patient's non-verbal status, which necessitated that clinical history and treatment response be assessed through close collaboration with his legal guardians and primary caregivers, who were actively involved throughout the decision-making process.

Clinical presentation typically includes abdominal distension, hypoactive bowel sounds, and systemic features such as low-grade fever or tachycardia, without overt peritonitis. In this case, the absence of guarding or rebound tenderness, along with a distended but soft abdomen, supported a functional rather than surgical etiology. The most feared complications -colonic ischemia and perforation- are closely associated with cecal diameters exceeding 12 cm or prolonged dilation exceeding 6 days.[8] Our patient's cecum measured 9.2 cm, placing him at intermediate risk. Imaging plays a pivotal role in diagnosis. Although plain abdominal films can suggest colonic dilation, contrast-enhanced CT is the gold standard for excluding obstruction, volvulus, or perforation.[9] Our CT findings demonstrated diffuse colonic distension without a transition point or signs of bowel wall compromise, consistent with Ogilvie's syndrome. Notably, the rectum was also dilated and filled with feces, helping to exclude Hirschsprung disease or acute toxic megacolon.

Standard initial management includes bowel rest, intravenous fluid therapy, electrolyte correction -particularly of potassium and magnesium- and gastrointestinal decompression.[1] The prokinetic agent neostigmine is the pharmacological treatment of choice for medically stable patients without contraindications, with reported success rates of 60%-90%.[3,10] However, in this case, neostigmine was not available. Instead, a regimen of nasogastric decompression, rectal tube placement, and metoclopramide was used. Although metoclopramide has not been validated in high-quality trials for Ogilvie's syndrome, it may offer some prokinetic benefit and has been used in resource-limited settings.[11] In this case, rectal tube decompression produced substantial clinical improvement, consistent with findings from case series in which mechanical decompression alone resolved pseudo-obstruction in select patients.[12,13] Endoscopic decompression or surgery is typically reserved for refractory cases or those complicated by signs of ischemia or peritonitis.[1]

To contextualize this case, we compared it with previously published reports of Ogilvie's syndrome, including cases, reviews, and meta-analyses in individuals who are younger or neurologically impaired. Table 1 summarizes the clinical characteristics, treatment modalities, and outcomes of similar publications reported in the literature.[3,10,11,14-18] This case represents one of the few cases successfully managed without neostigmine in a young adult with neurodevelopmental disability.

This case adds to the limited literature on Ogilvie's syndrome in younger individuals with neurodevelopmental disability,

Table 1. Literature review of selected case reports on acute colonic pseudo-obstruction, focusing on age, neurological comorbidities, neostigmine availability, treatment approaches, and outcomes

Author (year)	Age	Mental status/risk factor	Neostigmine used	Treatment approach	Outcome
Ponec et al.[3]	64	Normal	Yes	Neostigmine	Recovery
Valle and Godoy.[10]	71	Normal	Yes	Neostigmine	90% success
Batke and Cappell.[11]	82	Alzheimer's	No	Rectal tube, IV fluids	Delayed recovery
Wilczyński and Śnieżyński J.[14]	30	Pregnancy	No	Conservative, then surgery	Recovery
Du et al. (2024) [15]	32	Normal	No	Conservative	Recovery
Dewey and Prahlow.[16]	19	Cerebral palsy, autism	No	Not specified	Death
Zimna et al.[17]	69	Multiple comorbidities	Yes	Neostigmine	Recovery
Ali et al.[18]	27	Psychosis, immobility	No	Conservative: rectal tube + fluids	Recovery (within 72 hours)
The present study (2025)	39	Intellectual disability, immobility	No	Rectal + NG tube + metoclopramide	Recovered in 4 days

IV: Intravenous, NG: Nasogastric

a population in whom diagnosis is often delayed due to communication barriers and atypical presentations. Clinicians should maintain a high index of suspicion when evaluating progressive abdominal distension in such patients. Importantly, this case illustrates that in the absence of pharmacological agents such as neostigmine, conservative non-pharmacological interventions -including mechanical decompression and supportive care- can result in successful resolution. We believe this case reinforces the potential effectiveness of conservative management in carefully selected patients and highlights the importance of individualized, context-sensitive care in resource-limited settings.

Ethics

Informed Consent: Informed consent and consent for publication were obtained from the legal guardians of the patient described in this case.

Footnotes

Authorship Contributions

Surgical and Medical Practices: M.B.T., Concept: M.B.T., V.B.T., Design: M.B.T., V.B.T., Data Collection or Processing: M.B.T., V.B.T., Analysis or Interpretation: M.B.T., V.B.T., Literature Search: M.B.T., V.B.T., Writing: M.B.T., V.B.T.

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