



REVISTA MÉDICA DEL HOSPITAL GENERAL DE MÉXICO

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CLINICAL CASE

Pseudo Intestinal Occlusion: Case Report and Literature Review



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Received 23 July 2014; accepted 10 September 2014

Available online 4 December 2014

KEYWORDS

Pseudo-intestinal
occlusion;
Ogilvie syndrome;
megacolon;
magarectum

Abstract

Introduction: Chronic intestinal pseudo-obstruction is a rare but severe disease. Often passes unrecognized for long time.

Case Report: 75-year-old Hispanic male with a history of Parkinson's disease, Diabetes Mellitus Type 2 and Chronic Arterial Hypertension. He came to the ER with a 5 day progressive evolution of abdominal pain, distension, hyporexia and obstipation. A laparotomy was performed where we found a distended colon. We proceeded with a total colectomy and ileostomy. The specimen was 222x14x14 cm with a thin muscularis propria and present lymphatic cells. Post-operative course was unremarkable. The patient was sent home 48hr after the surgery tolerating soft diet.

Discussion: The main causes are idiopathic, diseases of central autonomic and enteric nervous systems, immune, collagen and metabolic diseases. Surgery is intended when there is multiple organ failure, important distention or failure of the medical treatment.

Conclusion: This case report highlights the importance of differential diagnosis and treatment of non-mechanical intestinal obstruction secondary to the effects of anti-parkinsonians, metabolic or idiopathic nature. With good surgical technique a positive outcome is likely.

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PALABRAS CLAVE

Pseudo-obstrucción intestinal;
síndrome de Ogilvie;
megacolon;
magarecto

Pseudo-Obstrucción Intestinal: Presentación de un Caso y Revisión de la Literatura**Resumen**

Introducción: La pseudo-obstrucción intestinal crónica es una enfermedad rara y severa. Muchas veces pasa desapercibido o tratado con diagnósticos incorrectos.

Caso clínico: Masculino de 75 años con antecedentes de Parkinson, Diabetes Mellitus tipo 2 e Hipertensión Arterial Sistémica. Inicia 5 días previos con dolor abdominal, hiporexia, constipación, obstipación, astenia, adinamia y náusea. Presenta distensión abdominal, aperistalsis, dolor y timpanismo. En las radiografías muestra distensión de colon generalizado. Se decide realizar Laparotomía Exploradora encontrando colon dilatado en su totalidad, sin obstrucción mecánica. Se realiza colectomía total e ileostomía. El paciente evoluciona de forma favorable sin complicaciones. El resultado histopatológico: espécimen de 22x14x14 cm con adelgazamiento de la muscular propia y células ganglionares presentes.

Discusión: Las principales causas son idiopático, enfermedad del sistema nervioso autónomo, enfermedades de la colágena o metabólicas. El cuadro clínico son episodios recurrentes de dolor abdominal, distensión, constipación y obstipación. Se considera la cirugía cuando existe falla orgánica múltiple, distensión importante o falla del tratamiento médico.

Conclusión: Este caso debuta con un cuadro obstrucción intestinal no mecánica que pudiera ser de origen idiopático, secundaria a fármacos o metabólico. La colectomía con ileostomía es una alternativa quirúrgica aceptable y segura.

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Introduction

Chronic intestinal pseudo-obstruction (CIPO) is a rare and severe disease characterized by the failure of the small bowel or colon to propel the contents of the intestinal tract simulating mechanical occlusion¹⁻³. It is one of the most important causes of chronic intestinal failure affecting both pediatric population (15%) and adults (20%). The ultimate result is an important nutritional deficiency. Often overlooked or misdiagnosed until complications or clinical symptoms¹ appeared. Constipation on the other hand, is one of the most common diseases with an incidence of 5-20%⁴.

Case Report

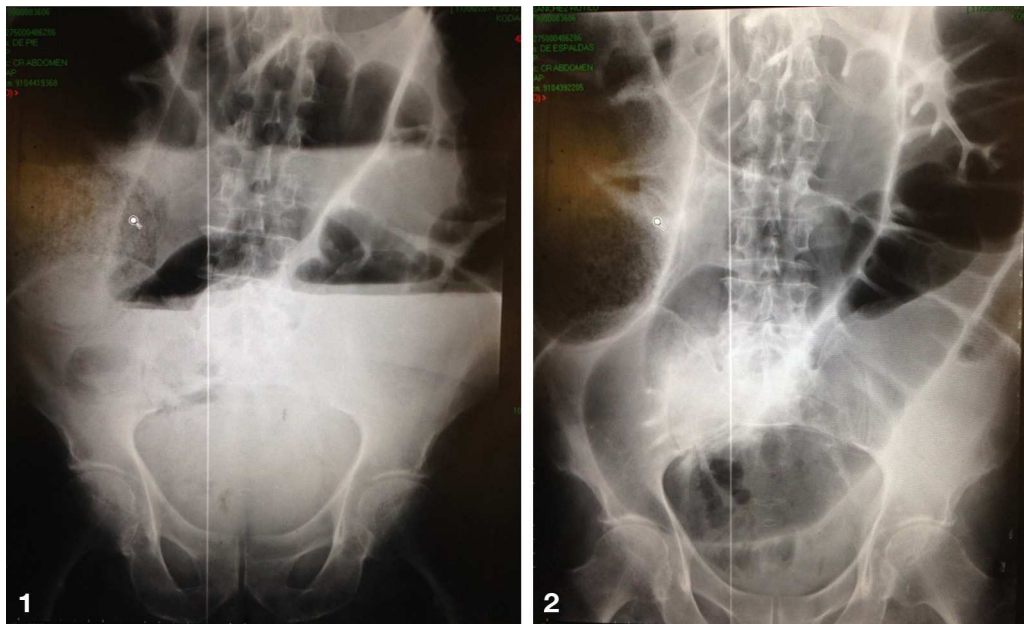
A 75 years old male who was admitted to our hospital due to abdominal pain and distention. It started five days before admission, with colic generalized abdominal pain, after food ingestion, intensity 4 out of 10, with partial improvement with Acetaminophen. Associate with anorexia, constipation and progressive obstipation. One day prior to admission, the patient refers fatigue, weakness and nausea without vomiting. He was treated with enemas and antibiotics without changes, so he decided to attend to our hospital. On admission, physical examination highlights tachycardia, dehydration, major abdominal distention, absence of bowel sounds, pain on superficial and deep palpation, negative sign of peritoneal irritation, generalized bloating, consistent with bowel obstruction. Laboratory findings highlight pre-renal failure, hyperglycemia, hypokalemia, hypocalcemia and metabolic acidosis. Blood count and liver function tests were within normal parameters. The patient

has a 10 year history of Parkinson's disease treated with amantadine 100 mg every 8 hours, levodopa / carbidopa 250 mg / 25 mg every 8 hours. Also, Diabetes Mellitus treated with metformin and systemic hypertension in treatment with felodipine 5 mg every 12 hours. Surgical history of transurethral prostatic resection 10 years ago.

The initial treatment was electrolyte management, nasogastric decompression, Foley and central venous catheter. Plain abdominal radiographs in two positions showed distended colon, with a cecum over 14 cm in diameter, and a redundant transverse colon and sigmoid ([Figure 1 and 2](#)).

We decided to perform an exploratory laparotomy and it was found a fully dilated colon, cecum 18 cm in diameter, transverse colon 12 cm in diameter, descending and sigmoid colon 15 cm in diameter; without macroscopic evidence of mechanical obstruction anywhere ([Image 3 and 4](#)). The small intestine macroscopically normal. We perform a total colectomy, closure of the rectum with Hartmann's procedure and ileostomy. The postoperative outcome of the patient was favorable, tolerated oral diet 12 hrs after surgery, and a functional ileostomy 24 hrs after surgery. His family requested to take home the patient 48 hrs post-operatively for economic reasons, however, stable. Phone monitoring is done a week of discharge, referring asymptomatic, functional ileostomy with approximately 500cc a day.

The pathology reports a specimen macroscopically of 22x14x14 cm with congestive surface, ileum 8 cm long and appendix of 9x0.6x0.6 cm; flattened mucosa, light brown and slightly congestive ([Figure 5](#)). In histological sections of the muscularis, they observed present ganglion cells without dysplasia. The histopathological diagnosis reports mild non-specific colitis consistent with chronic idiopathic intestinal pseudo-obstruction and acute peritonitis.



Images 1 and 2 Plain radiograph of the abdomen.



Image 3 sigmoid colon distended with rough measure 15 cm in diameter.

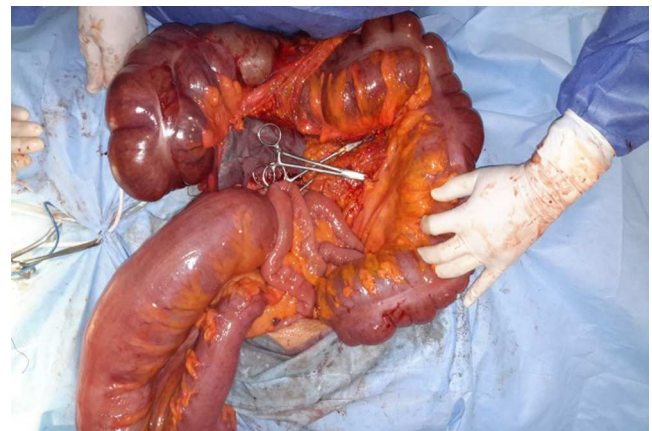


Figure 4 Evidence of trans-operative distension of the colon with cecum of 18 cm in diameter. Small intestine normal.

Discussion

The main causes of intestinal pseudo-obstruction can be divided into: 1) idiopathic (Ogilvie syndrome), 2) both enteric disease or central autonomic nervous system (stroke, encephalitis, basal ganglia calcification, orthostatic

hypotension, Von Recklinghausen disease, Hirshsprung disease), 3) collagen diseases (paraneoplastic, scleroderma, dermatomyositis, amyloidosis, Ehlers-Danlos syndrome, lupus, among others), 4) endocrine and metabolic diseases (diabetes mellitus, hypothyroidism, hyperparathyroidism, pheochromocytoma), 5) drugs (clonidine phenothiazines, antidepressants, antiparkinsonian, antineoplastic, bronchodilators, anthraquinone), and 6) other (iatrogenic, jejunal diverticula and Chagas disease) (1,3). The autonomic etiology is the most common pathology, specifically in the colon^{4,6}.

The typical clinical features are recurrent episodes of abdominal pain, bloating, constipation and obstipation, with or without nausea, vomiting, dysphagia and weight loss^{1,3,5}. Only 25% of patients presents an acute episode, where radiographical findings are dilated bowel loops and air-fluid levels. Entero-CT can be done to rule out mechanical occlusion^{1,2}. The natural course of the disease is usually

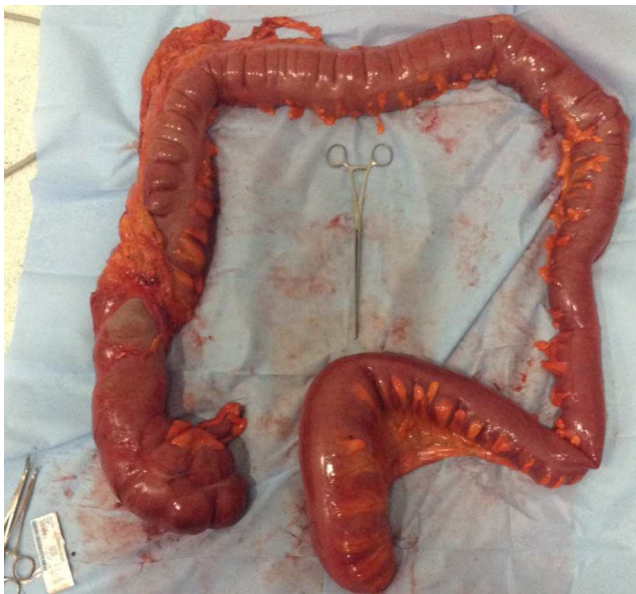


Figure 5 Macroscopic total colectomy.

progressive deterioration and chronically malnutrition. The most frequent causes of death are related to the parenteral nutrition, transplant or post-surgical complications due to septic shock which is observed in 50% of patients 5 years from treatment¹.

The initial treatment during the acute episode is intravenous fluids and electrolytes, abdominal decompression with a nasogastric or rectal tube, colonoscopy or cecostomy; tegaserod, cisapride, erythromycin, somatostatin or octreotide and / or neostigmine (1.5). The pivalopride can also improve the chronic state (6).

The diagnosis is made with full thickness biopsies. Surgery is considered when signs of multiple organ failure appeared, important abdominal distension or failure of medical treatment, which occurs in 58% of patients^{1,2,7}. Indications of medical treatment failure are younger age, chronic disease, bloating as the main symptom and major cecum distention².

Current Surgical treatment for megacolon⁷:

Colon Procedures:

- Subtotal colectomy: 71% therapeutic success (75% ileo-sigmoid anastomoses, 77% ileo-rectal anastomoses, 50% ceco-rectal anastomoses). Mortality up to 14%, complication rate of 25% secondary to anastomotic complications, recurrent intestinal obstruction (14.5%), and fecal incontinence (20%).
- Segmental colectomy: 48.4% therapeutic success, mortality and morbidity of 2.3% to 13% with reoperation rate of 23.8%.

Rectal Procedures:

- Anterior rectal resection: there is only one study reporting a success of 75% with a 50% of complication rate.
- Proctectomy: treatment success of 71%, mortality 6.5%, morbidity 6.5% and 9.7% reoperation for recurrent constipation (14-17%).

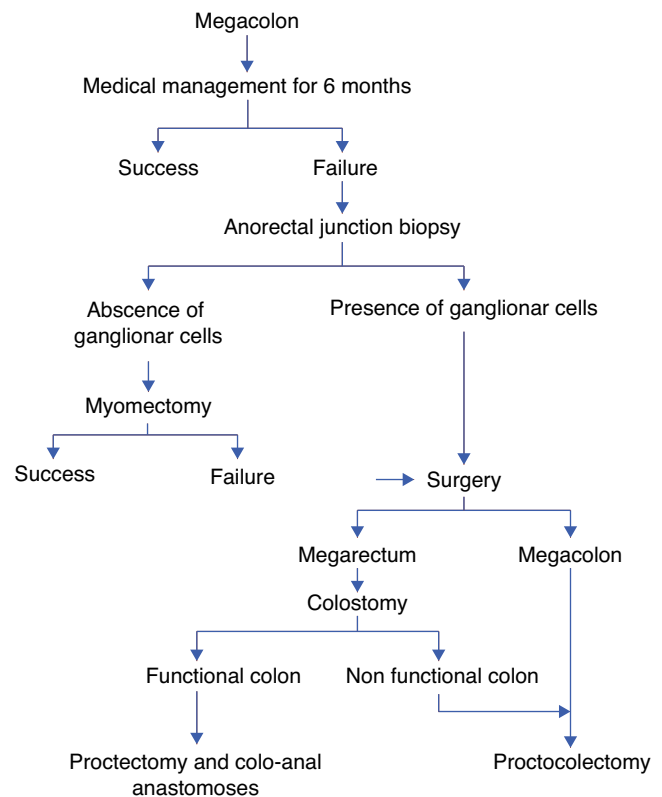


Figure 6 treatment scheme megacolon.

- endorectal pull-through: only one study was performed in 4 patients with 25% mortality, 75% morbidity, reoperation 50% pelvic abscess.
- Duhamel procedure: therapeutic success. 87%, 3% mortality, 60% morbidity (rectovaginal fistula or bowel, pelvic abscess, anastomotic stricture), recurrent constipation 7%.
- Vertical rectoplastia: new procedure, only one study reported in the therapeutic success of 83%, 17% morbidity (fistula) and no mortality.
- Restorative proctocolectomy: 73% treatment success, mortality 0%, 0-40% morbidity (anastomotic leakage, nocturnal fecal incontinence).

Pelvic Floor Procedure:

- Internal Sphincterotomy: as beneficial in 33% and 40% secondary procedure when it is primary.
- Division puborectalis: No evidence of being a functional procedure for this condition.

Stoma: 40-100% treatment success, mortality 0%, morbidity 17%.

CB Ó Súilleabháin⁸ proposes the following treatment scheme megacolon (Fig. 6).

Eon Han Chul⁴ in a study of 33 patients with colonic pseudo-obstruction, postoperative complications reported in 22% of patients with the most frequent surgical wound infection, followed by ileus, intra-abdominal abscess and diarrhea.

Conclusion

In the case of our patient, presented clinical data of no mechanical bowel obstruction that may be idiopathic or secondary to drugs, especially anti-Parkinson. He presented a favorable postoperative evolution with possible intestinal reconnection in 3-6 months. We decided not to perform the anastomosis in the same surgical procedure by not having an accurate diagnosis and information about the absence of ganglion cells or commitment anorectal complex, however, based on the good performance, we propose the combination of colectomy with ileostomy in patients managed as a surgical emergency, although further studies are required to determine the usefulness of this therapeutic approach.

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