Case Report

The Royal Society of Medicine

Journal of the Royal Society of Medicine Open;
15(5) 1–4
DOI: 10.1177/20542704241244555

Postpartum Ogilvie syndrome, cause of acute intestinal obstruction

Nezha Elbahaoui, Oumayma Lahnaoui, Sara Benammi, Mohamd Ouanani and Abdelkader Errougani

Emergency Surgical Department, Ibn Sina University Hospital, University Mohamed V Department of the Emergency Surgery (UCV), Rabat, Morocco

Corresponding author: Nezha Elbahaoui. Email: nezhaelbahaoui@gmail.com

Lesson

Ogilvie's syndrome presents as a rare complication in the postpartum period. Prompt diagnosis is crucial to prevent colonic perforation, occurring in 25 to 40% of cases, leading to significant mortality.

Keywords

Syndrome d'Ogilvie, Post-partum, occlusion intestinale aiguë, prise en charge médicale

Acute intestinal obstruction is a common medical–surgical emergency with various causes depending on the obstruction mechanism and location. Ogilvie syndrome is a functional distension of the colon leading to acute lower intestinal obstruction, often associated with underlying medical conditions, particularly neurological or surgical, involving the abdomen, pelvis, or orthopaedic regions. We describe a case of a patient admitted with intestinal obstruction 33-day postpartum. This report aims to diagnose Ogilvie syndrome and prevent fatal complications promptly.

Case report

Patient history

We present the case of a 39-year-old primigravida who underwent a caesarean section due to previous infertility and had a history of uterine fibroids. The patient was admitted to the surgical emergency department 33-day postpartum with acute intestinal obstruction and increased abdominal pain.

Clinical findings

Upon examination, the patient was apyretic and hemodynamically stable. Physical examination revealed a distended and soft abdomen with mild tenderness at the Pfannenstiel scar. Rectal examination showed an empty ampulla. Abdominal X-ray revealed colonic air-fluid levels. An abdominopelvic CT scan was performed to determine the cause of the occlusion, which showed distension of the colonic framework and partial distension of the last few bowel loops without any visual obstruction. The maximum caecal diameter measured 9 cm. Only a small pelvic effusion was observed (Figure 1).

Laboratory tests showed a high white blood cell count (15,000 E/mm^3), elevated C-reactive protein (130 mg/l), and mild hydroelectrolytic disturbances including hypokalaemia (3.4 mEq/l) and hyponatremia (129 mEq/l).

Therapeutic intervention

Immediate resuscitation measures included the insertion of a nasogastric tube, a urinary catheter, and two peripheral venous lines. The patient was kept on strict fasting with exclusive parenteral nutrition until bowel transit resumed on the fourth day of admission, initially with the passage of gas and later with stool.

Colonoscopy with exsufflation could not be performed on our patient due to organisational issues within our facility.

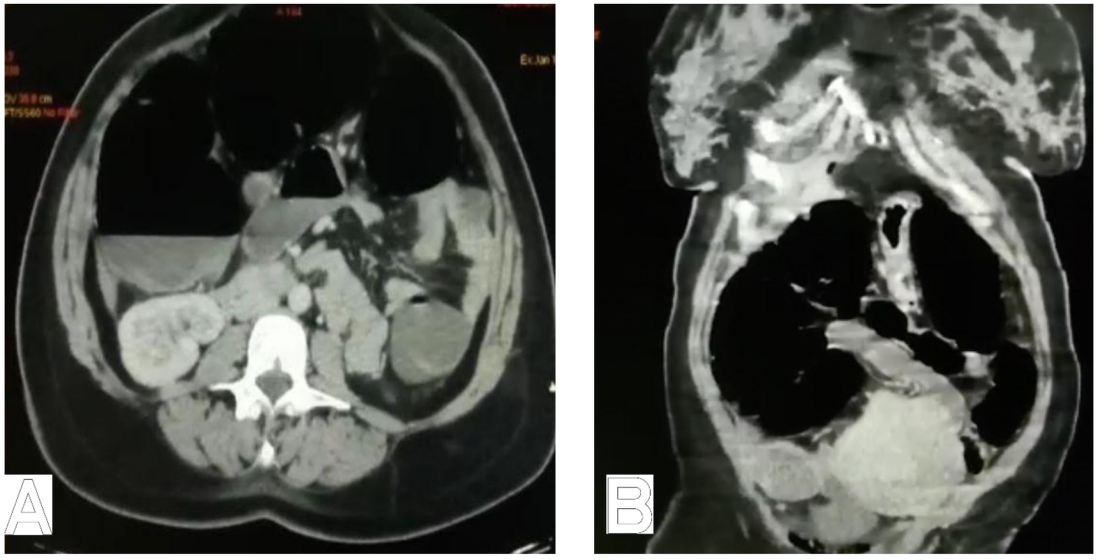
Follow-up radiological imaging showed a decrease in colonic air-fluid levels. Enteral feeding was gradually reintroduced after removing the gastric tube on the fifth day, with close monitoring of bowel transit. The patient was discharged home on the seventh day with good clinical and radiological follow-up for 3 months.

Discussion

Ogilvie's syndrome, also known as acute colonic pseudo-obstruction, was first described by Ogilvie in 1948.[1] Its incidence is challenging to evaluate, but it is more common in men and typically occurs in individuals aged 50–60 years old.[2]

It is characterised by acute colonic dilatation without mechanical obstruction and often presents in elderly patients with underlying chronic conditions or after

Figure 1. Abdominopelvien CT. (A) axial and (B) coronal: distension of the colonic framework and the last few bowels without any obstruction visualised with a maximum caecal diameter of 9 cm.



acute triggering factors. The postpartum period, both after caesarean section and vaginal delivery,[3] has been reported as a triggering factor for Ogilvie syndrome, with a frequency of occurrence ranging from 25% to 40%.[4,5] It is associated with a high mortality rate, necessitating a high level of suspicion for diagnosis.

The first case of perforation described in 1958 corresponded to a post-caesarian Ogilvie syndrome.[6]

The pathophysiology of Ogilvie syndrome remains poorly understood. It is believed to result from a combination of disturbances in the colonic autonomic nervous system and ischaemic events.[7,8] Trauma or surgery in the pelvic region, including childbirth, can cause damage to the parasympathetic innervation of the colon, leading to atony in the left colon.

The clinical presentation typically includes acute or progressive lower intestinal obstruction, with abdominal distension being the most common sign. Bowel transit disorder and vomiting may also occur.[9,10]

Abdominal pain and tenderness in the right iliac fossa suggest caecal perforation, which is a negative prognostic indicator.

Biological tests do not significantly contribute to the definitive diagnosis but play a role in detecting electrolyte imbalances resulting from colonic dilatation in the third sector. In some cases, the presence of an initial systemic infection syndrome can raise concerns about the possibility of an infectious complication.

Radiological exploration plays a crucial role in diagnosing and determining the aetiology of colonic distension. The unprepared abdomen X-ray shows overall colonic gas distension, particularly in the caecum and rectosigmoid junction. However, this examination lacks specificity in diagnosing the origin and mechanism of the occlusion, as well as detecting complications such as caecal perforation, since the presence of pneumoperitoneum is inconsistent and can be physiological after laparotomy.

According to Weber *et al.*, bowel distension was observed in 30% of cases,[11] although the presence of air-fluid levels was inconsistent. The preservation of colonic haustrations, the infrequency of air-fluid levels, and the presence of gas in the rectal ampulla suggest a functional obstruction,[12] which aligns with our patient's condition.

The abdominopelvic CT scan with contrast injection (considering renal function) remains the crucial examination for establishing the diagnosis by ruling out other differential diagnoses of the occlusion, such as mechanical obstruction, extrinsic compression, or colonic volvulus. It also aims to assess the severity criteria by evaluating the colonic wall quality, caecal diameter, and presence of colonic pneumatosis.

In some cases, authors recommend colonoscopy with colo-exsufflation for diagnostic purposes, confirming the integrity of the colonic wall, lumen continuity, and mucosal condition. Additionally, it can be used therapeutically to reduce caecal diameter by aspirating air and contents of colonic stasis.[9]

Overall, in cases of delayed postpartum resumption of bowel movements, regardless of the presence of functional gastrointestinal symptoms, the possibility of Ogilvie syndrome should be considered, and an unprepared abdomen should be conducted as the initial

diagnostic approach. Subsequent paraclinical examinations should be pursued based on the clinical presentation.[12]

Idiopathic acute colonic pseudo-obstruction is a medical–surgical emergency, and treatment aims to reduce colonic distension and prevent secondary perforation. It depends on the patient's general condition, caecal diameter on imaging, and signs of caecal perforation.

Medical management involves decompression of the upper gastrointestinal tract with a nasogastric tube, restriction of enteral feeding with parenteral nutrition, and correction of hydroelectrolytic imbalances through peripheral venous rehydration. Additionally, medical treatment includes the use of multimodal analgesia, gastric protection against stress ulcers, and the prevention of thromboembolic risks.

Literature reports suggest that parasympathomimetics such as intravenous Prostigmine can be beneficial in the medical management of functional occlusion. However, close clinical and cardiac monitoring is essential, and having an atropine syringe readily available is recommended due to the known adverse effects of Prostigmine.[13]

In the literature, surgical intervention is mentioned as a treatment option. In a study involving 169 cases treated medically and with colo-exsufflation, 13% of the patients experienced a recurrence of symptoms.[14]

Surgical intervention typically involves a minimally invasive exploration of the abdominal cavity using either laparotomy or laparoscopy, depending on the patient's general condition. Three surgical approaches are suggested: cecostomy, transverse colostomy, or right colectomy. The choice of procedure depends on the presence of signs indicating pre-perforation or caecal perforation, with or without immediate restoration of continuity.

Medical treatment is always considered the primary approach, regardless of the chosen strategy. It is generally followed by colo-exsufflation if the symptoms do not improve or if the diameter of the caecum exceeds 9 cm. If the symptoms persist or fail to improve after 48 h of conservative treatment, a second attempt at endoscopic treatment may be considered, unless there are signs of complications that require emergency surgery.

Considering all aetiologies, the mortality rate in the absence of complications is estimated to be between 15% and 31%, increasing to 45% after perforation.[9] The elevated mortality rate appears to be more associated with the weakened condition of the patients rather than the Ogilvie syndrome itself.[9,15] Four prognostic factors have been identified:[12] patient age, caecal diameter, the time interval between diagnosis and colonic decompression, and the presence of ischaemia or colonic perforation.[5]

Long-term follow-up involves clinical and radiological monitoring due to the recurring nature of the clinical presentation for up to 60-day postpartum.

Conclusion

Postpartum Ogilvie syndrome is a rare cause of intestinal obstruction that should be considered in postpartum patients presenting with abdominal distension or failure to resume bowel transit. Timely diagnosis is crucial to prevent complications such as perforation, which significantly impact prognosis.

Declarations

Competing interests: None declared.

Data availability: Data sharing does not apply to this article as no datasets were generated or analysed during the current study.

Funding: None declared.

Ethical approval: Not applicable. This study is retrospective, approval by the Ethics Committee of Biomedical Research was not necessary according to the local reglementation (Law 28.13, Article 2).

Guarantor: Nezha Elbahaoui.

Contributorship: All authors have accepted responsibility for the entire content of this manuscript and approved its submission.

Informed consent: Informed consent was obtained from individuals included in this study. The consent for publication of data has been taken from the patient's husband.

Provenance: Not commissioned, peer reviewed by Alistair A. P. Slesser.

ORCID iDs

Nezha Elbahaoui https://orcid.org/0009-0006-8270-4029
Oumayma Lahnaoui https://orcid.org/0000-0001-5610-8887
Sara Benammi https://orcid.org/0000-0001-9106-0794

References

1. Ogilvie H. Large-intestine colic due to sympathetic deprivation, a new clinical syndrome. *Br Med J* 1948;9:671–673.
2. Tenofsky PL, Beamer L and Smith RS. Ogilvie's syndrome as a postoperative complication. *Arch Surg* 2000;135:682–687.
3. Kammen BF, Levine MS, Rubesin SE and Laufer I. Adynamic ileus after caesarean section mimicking intestinal obstruction: findings on abdominal radiographs. *Br J Radiol* 2000;73(873):951–955.
4. Spira IA and Wolff WI. Colonic pseudo-obstruction following termination of pregnancy and uterine operation. *Am J Obstet Gynecol* 1976;126:7–12.
5. Norton L, Joung D and Scribner R. Management of the pseudoobstruction of the colon. *Surg Gynecol Obstet* 1974;138:595–598.
6. Robertson JA, Eddy WA and Vosseler AJ. Spontaneous perforation of the cecum without mechanical obstruction. *Am J Surg* 1958;96:448–452.
7. Moore JG, Gladstone NS, Lucas CGW, Ravy MJR and Ansari AH. Successful management of post cesarean section acute pseudoobstruction of the colon (Ogilvie's syndrome) with colonoscopic decompression, a case report. *J Reprod Med* 1986;31:1001–1004.

8. Choo YC. Ileus of the colon with cecal dilatation and perforation. *Obstet Gynecol* 1979;54:241–245.
9. Vanek VW and Al-Salti M. Acute pseudo-obstruction of the colon. *Dis Colon Rectum* 1986;29:203–210.
10. Roberts CA. Ogilvie's syndrome after cesarean delivery. *J Obstet Gynecol Neonatal Nurs* 2000;29:239–246.
11. Weber P, Heckel S, Hummel M and Dellenbach P. Syndrome d'Ogilvie après césarienne. À propos de trois cas. Revue de la littérature. *J Gynecol Biol Reprod* 1993;22:653–658.
12. Mainguy Le Gallou C, Eboué C, Vardon D, Von Théobald P and Dreyfus M. Syndrome d'Ogilvie après césarienne: savoir y penser! À propos de deux cas post-césarienne et revue de la littérature. 2011;40(6):0–563. doi:10.1016/j.jgyn.2010.11.010.
13. Ould-Ahmed M, De Saint-Martin L, Ansart S, Renault A and Boles JM. Syndrome d'Ogilvie traité par néostigmine lors d'une méningo-encéphalite à Streptococcus pneumoniae. *Ann Fr Anesth Reanim* 2003;22:900–903.
14. Gosche JR, Scharpe JN and Larson GM. Colonoscopic decompression for pseudo-obstruction of the colon. *Am Surg* 1989;55:111–115.
15. Kukora JS and Dent TL. Colonoscopic decompression of massive nonobstructive cecal dilatation. *Arch Surg* 1977;112:512–517.