



E-ISSN: 2708-1508

P-ISSN: 2708-1494

Impact Factor (RJIF): 5.39

IJCRR 2025; 7(2): 256-258

www.casereportsofsurgery.com

Received: 14-07-2025

Accepted: 18-08-2025

Mei Jing Ho

Department of General
Surgery, Wollongong Hospital,
Wollongong, Australia

Nicholas Shannon

Department of General
Surgery, Wollongong Hospital,
Wollongong, Australia

Takako Yabe

Department of General
Surgery, Wollongong Hospital,
Wollongong, Australia

Corresponding Author:

Mei Jing Ho

Department of General
Surgery, Wollongong Hospital,
Wollongong, Australia

Second Trimester Ileostomy Obstruction Secondary to Uterine Compression: A Case Report

Mei Jing Ho, Nicholas Shannon and Takako Yabe

DOI: <https://www.doi.org/10.22271/27081494.2025.v7.i2d.228>

Abstract

Ileostomy obstruction during pregnancy is an uncommon but clinically significant event. We describe a case of functional small bowel obstruction in the second trimester due to extrinsic uterine compression of the distal ileum in a patient with an ileostomy from her previous colonic resection for Crohn's disease. Diagnosis was confirmed by magnetic resonance imaging, allowing effective non-operative management via catheter decompression through the stoma, minimising surgical and foetal risks. This case underscores the fact that mechanical compression by the gravid uterus is an under-recognised aetiology and the importance of considering it as a differential diagnosis for intestinal obstruction in pregnant patients with ileostomy.

Keywords: Ileostomy obstruction, catheter decompression, complications during pregnancy

Introduction

Intestinal obstruction is a rare complication of pregnancy, most frequently presents during the second or trimester of pregnancy ^[2, 3]. Although rare, such obstructions can result in significant maternal and foetal morbidity if not promptly recognised and managed appropriately ^[3-6]. Historically, intestinal obstruction during pregnancy has been attributed to postoperative adhesions ^[3, 4]. Less common causes include hernia, malignancy and volvulus. However, emerging evidence suggests that mechanical compression by an enlarging uterus may represent an under-recognised cause ^[1, 6]. Identifying uterine compression as a potential factor is crucial, as it avoids upfront surgery such as adhesiolysis and allow a trial of conservative measures such as decompression with drainage tube or stenting in these cases, thereby minimising the risk associated with surgical intervention during pregnancy ^[1, 6]. This case underscores the diagnostic and therapeutic challenges posed by ileostomy obstruction in the obstetric population and emphasises the need of maintaining a high index of clinical suspicion. A multidisciplinary collaboration is essential to ensure timely diagnosis and optimise maternal-foetal outcomes.

Case Report

A 28-year-old woman, gravida 2 para 1, at 23 weeks' gestation, presented to the emergency department (ED) with a 24-hour history of generalised abdominal pain, nausea, vomiting, and absent ileostomy output. This is on a background of medically refractory ileocolonic Crohn's disease, for which she had undergone a total colectomy with end-ileostomy formation three years prior. Other relevant surgical history included an elective lower segment caesarean section prior to her total colectomy.

On presentation, her vital signs were stable. Abdominal examination revealed mild generalised abdominal tenderness without signs of peritonism. The stoma appeared healthy, but there was no effluent or flatus observed. Routine blood investigations were within normal limits. A provisional diagnosis of adhesional SBO was made, and initial management include placement of nasogastric tube for gastric decompression and intravenous fluid hydration. Foetal heart monitoring performed by the obstetrics team, was reassuring.

Despite initial conservative measures, the stoma remained inactive, and the patient continued to have high nasogastric output. To avoid ionising radiation exposure, a magnetic resonance imaging (MRI) of the abdomen and pelvis was performed, to assess for a transition point, evidence of adhesions, or other causes possible causes of mechanical obstruction. Imaging demonstrated distal small bowel dilatation with faecalisation in the segment. However, there

was no definitive transition point or cause of obstruction reported. The images were subsequently reviewed by the treating team and a focal area of extrinsic compression was noted, approximately 4cm proximal to the ileostomy, adjacent to the gravid uterus. These findings were suggestive of a mechanical obstruction secondary to uterine compression (Figure 1). A decision was made to proceed with bedside decompression via a 22Fr soft tip foley catheter passing into the stoma. This resulted in immediate drainage of faecalised contents and symptomatic relief. A repeat decompression was required 36 hours later, which led to transient spontaneous stoma function.

However, the patient developed recurrent episodes of obstructions, characterised by abdominal pain, distension and absent stoma output, necessitating re-intubation. The patient was subsequently educated on intermittent self-catheterisation of the ileal conduit and aspiration as required for symptomatic management. The patient improved clinically and was kept on full fluid diet. She was discharged home with outpatient surgical follow-up.

The patient re-presented to ED one month later, with peristomal pain and a non-functioning stoma. She was managed conservatively again with decompression and resulted in partial symptomatic improvement. Unfortunately, the admission was complicated by threatened pre-term labour, necessitating transfer to another tertiary hospital with neonatal intensive care services. Despite medical efforts delay delivery, the patient experienced uterine contractions with cervix dilatation to 3cm at 29 weeks' gestation, warranting an emergency caesarean section. A live female infant was delivered successfully.

Following delivery, the patient's ileostomy was functional without the need for further intubation. However, her post-operative recovery was complicated by a delayed small bowel perforation, requiring a return to the operating theatre for an exploratory laparotomy, small bowel resection and reformation of ileostomy. The site of perforation was noted to be at the fascial level, of which approximately 20cm of small bowel was resected. Post-operatively, she made gradual clinical improvement and was able to tolerate gradual upgrades in diet.

Discussion

Although uncommon, ileostomy obstruction in pregnancy carries significant clinical implications. Early recognition and prompt treatment are essential, as delayed diagnosis can result in bowel ischaemia or perforation, with associated systemic and obstetric complications, including premature delivery and foetal demise [1, 6, 8]. The incidence of ileostomy obstruction in pregnancy is not well-documented, with only a limited number of cases reported in the literature, reflecting an under-recognised clinical entity [1, 2, 7]. The anatomical positioning of the end ileostomy puts the terminal ileum in close proximity to the enlarging uterus, rendering it susceptible to extrinsic compression [1, 2].

Imaging plays a crucial role in delineating the underlying aetiology, with MRI being the modality of choice in pregnancy due to its safety profile and diagnostic utility [4, 6]. It is able to provide high resolution imaging and soft tissue contrast without exposure to harmful ionising radiation. In our case, MRI was instrumental in differentiating between adhesive and compressive causes. Furthermore, it allows for identification of the transition point and helps to exclude other possible causes of intestinal obstruction, which

influenced the course of treatment.

Management of SBO in the obstetric population must balance the urgency of maternal treatment against minimisation of foetal risks. Existing literature suggests the need for operative management when conservative measures fail [2, 6, 8]. However, surgery in pregnancy carries its own risks too, notably associated with pre-term labour and delivery, which in turn introduces significant neonatal morbidity [1, 3-6]. This report raises the awareness of an uncommon, non-adhesive cause of SBO in pregnant patients with ileostomy and introduces a minimally invasive approach as a potential alternative to surgery. We propose that the use of intermittent Foley catheter decompression as an effective, temporising strategy that may eliminate the immediate need for surgical intervention. This approach functions as a bridge to definitive management, enabling crucial delay – and in select cases, potential avoidance – of emergent delivery. Such delay is clinically paramount, as it permits foetal maturation to a more viable gestational age, thereby significantly improving perinatal outcomes. This benefit remains relevant even when acknowledging that surgical intervention may ultimately become necessary due to progressive uterine enlargement.

Key procedural considerations include a detailed review of imaging to localise the point of obstruction and estimate the expected depth of intubation. A wide-bore catheter, such as a 20Fr Foley catheter, is recommended for the procedure. With the patient in a supine position, the catheter should be advanced carefully with constant feedback from the patient to signal any discomfort or pain. The use of cardiotocography (CTG) may be considered during the process to monitor foetal well-being and detect early signs of distress, given the potential risk of uterine stimulation during stoma intubation. Gentle digital examination of the stoma may assist in determining the optimal angle of insertion. Initial resistance may be encountered at the level of fascia and/or at the presumed level of uterine obstruction. However, gentle, persistent advancement would still allow the catheter to slide pass slowly. Successful decompression is indicated by an immediate release of resistance and the aspiration or spontaneous release of gas or intestinal contents. Re-positioning the patient, for instance with the right side slightly elevated, may facilitate decompression by relieving localised pressure and altering foetal position. If unsuccessful, re-attempting the procedure at a later time may be beneficial, particularly, if the position of the foetus has changed. In addition, excessive negative pressure should be avoided to prevent mucosal trauma. Once aspiration ceases, a short pause may allow proximal contents to flow distally, enabling further aspiration.

Intermittent catheterisation of the ileal conduit may be required for the remaining duration of the pregnancy. As such, patient education is crucial to ensure that the patient is able to manage independently at home. In the present case, the team has decided against leaving the catheter in-situ. To the best of our knowledge, there is currently no evidence supporting either benefits or risks of leaving a catheter in-situ for a prolonged period of time. Whilst tubes may be routinely left in-situ in the intestinal lumen for other circumstances (e.g. feeding or nasogastric tubes), there is still theoretical concerns regarding the risk of increased focal pressure at the point of extrinsic compression with a foreign body leading to potential tissue necrosis or even perforation in the later stages of pregnancy, secondary to an

enlarging uterus.

Dietary modification, such as a low fibre diet, may be necessary throughout pregnancy so as to reduce stool bulk and consistency. Given the increased metabolic demands of pregnancy, nutritional assessment and support is critical, hence early dietitian involvement is essential to optimise maternal dietary intake and foetal growth. In the acute setting when patient is symptomatic from intestinal obstruction, early obstetric involvement is warranted to monitor foetal well-being. A multidisciplinary approach is therefore paramount to achieve optimal outcomes for both mother and foetus.

In summary, this case highlights the importance of considering uterine compression as a cause of ileostomy obstruction in pregnancy. Early detection of this uncommon but significant complication enables appropriate conservative management and may prevent unnecessary surgical intervention. MRI serves as a valuable diagnostic tool, not only provides detailed assessment to aid in accurate diagnosis but also to exclude alternative causes, and guide safe, non-operative management. Despite the simplicity of treatment, this remains a complex issue and will require early involvement of a multidisciplinary team, including obstetrics, stoma therapist and dietitians.

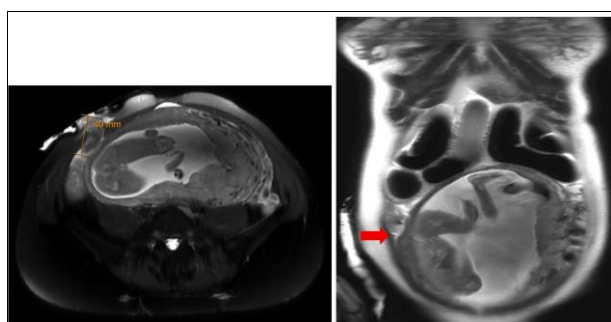


Fig 1: A) Axial and B) Coronal MRI image showing focal point of extrinsic compression by the uterus (red arrow), measuring 4cm from the ileostomy

Conflict of Interest

Not available

Financial Support

Not available

References

1. Spring A, Lee M, Patchett S, Deasy J, Wilson I, Cahill RA. Ileostomy obstruction in the third trimester of pregnancy. *Colorectal Dis.* 2012;14(9):e631-2
2. Porter H, Seeho S. Obstructed ileostomy in the third trimester of pregnancy due to compression from the gravid uterus: diagnosis and management. *BMJ Case Rep*, 2014:bcr2014205884
3. Zachariah SK, Fenn MG. Acute intestinal obstruction complicating pregnancy: diagnosis and surgical management. *BMJ Case Rep*, 2014:bcr2013203235
4. Webster PJ, Bailey MA, Wilson J, Burke DA. Small bowel obstruction in pregnancy is a complex surgical problem with a high risk of fetal loss. *Ann R Coll Surg Engl.* 2015;97:339-44
5. Allen VM, O'Connell CM, Baskett TF. Intestinal obstruction in pregnancy: a 30-year review. *Am J Obstet Gynecol.* 1999;180:358-61

6. McKenna DA, Meehan CP, Alhajeri AN, Regan MC, O'Keeffe DP. Small bowel obstruction in pregnancy: successful management with MRI and conservative therapy. *AJR Am J Roentgenol.* 2007;188(2):W181-4
7. Iqbal CW, Cullinane DC, Schiller HJ. Small bowel obstruction during pregnancy after ileostomy: a case report and review of the literature. *J Surg Educ.* 2007;64(1):48-50.
8. Meyerson S, Holtz T, Ehrinpreis M, Dhar R. Small bowel obstruction in pregnancy. *Am J Gastroenterol.* 1995;90:299-302

How to Cite This Article

Ho MJ, Shannon N, Yabe T. Second Trimester Ileostomy Obstruction Secondary to Uterine Compression: A Case Report. *International Journal of Case Reports in Surgery.* 2022;7(2):256-258

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.