

## Research Article

# Megacolon in Primigravida during Second Trimester: A Case Report

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## Abstract

Toxic megacolon is one of the fatal complications of Inflammatory Bowel Disease (IBD), including Ulcerative Colitis (UC) and Crohn's Disease (CD). It is not very common for UC to present for the first time during pregnancy, especially with complications like toxic megacolon.

Here, we have described a case of megacolon in a primigravida in late second trimester most probably due to IBD. The baby was delivered via cesarean section, and the mother was managed conservatively. Postnatal periods for both mother and baby were uneventful.

**Keywords:** Inflammatory bowel disease; Ulcerative colitis; Crohn's Disease; Toxic megacolon; Pregnancy

## Introduction

Toxic megacolon is one of the rare and very serious complications of Inflammatory Bowel Disease (IBD) or colonic disorder of infectious etiology. Toxic megacolon is associated with total or partial non-obstructive dilatation of colon along with systemic symptoms of sepsis. In the majority of the cases, surgical management is necessary.

Other than IBD, toxic megacolon might occur in association with infections, especially due to *C. diff* and cytomegalovirus infections.

IBD, a chronic inflammatory disease, consists of three separate disease entities, namely Ulcerative Colitis (UC), Crohn's Disease (CD), and non-specific IBD.

A literature search reveals the incidence of UC among females to be 9.8 per 1 lakh population; its peak age of onset is between 25 and 34 years. Again for CD, the incidence is 5 per 1 lakh population, and peak onset occurs between 15 and 24 years [1]. Hence it is evident that both the types of IBD are rather common in females of reproductive age group. UC characteristically starts in the rectum and gradually progresses proximally. In 1/5<sup>th</sup> to 1/3<sup>rd</sup> patients, the disease eventually affects the entire colon. In UC, typically, the mucosal layer of the colon is affected. UC presents with diarrhea with blood and mucus, along with cramping abdominal pain and painful passage of stool. Sometimes low-grade fever might accompany [1-3].

In comparison to UC, CD affects the colon in a segmental fashion. Although it can affect any part of the digestive tract, it usually affects the terminal portion of the ileum and proximal colon. In contrast to UC, in CD, all the layers of the colon are affected (transmural). Presenting features include pain in the abdomen, diarrhea (with or without blood), and bloating. Like UC, patients might also suffer from

low-grade fever in CD. The clinical course of both UC and CD is also similar, as in both the disease symptoms usually follow a characteristic pattern of periodic exacerbation followed by periods of remission [3].

Here, we describe a case of pregnant women presenting with chronic constipation (megacolon) that might be due to IBD at the end of the second trimester.

## Case Presentation

A 24-year-old primigravida attended the antenatal clinic regularly from 11 weeks of conception. Her history included chronic hypertension for 1 year, which was controlled by antihypertensive. There was no other significant past surgical or medical history or previous episodes of admissions to the hospital.

At 26 weeks, she came to the emergency department with lower abdominal pain, and had a history of constipation for 1 week; there were no urinary symptoms and any history of vaginal discharge. Fetal well-being was ensured by ultrasound. On abdominal examination, a distended abdomen with tenderness on the left side was noted. It was difficult to appreciate an abdominal mass with a gravid uterus. However, on vaginal examination (performed with difficulty), the posterior wall bulge felt smooth in outline, but the firm in consistency and cervix could not be reached.

The patient was admitted, and on further inquiry, she revealed that this abdominal pain was rather chronic (for about 5 years) characterized by periods of exacerbation with intervening periods of remission. However, she never sought any medical advice. On further probing, she gave a history of chronic constipation, and on this occasion, she didn't pass stool (but passed flatus) for 10 days.

After evaluation by surgeons, she was advised to take saline enema and to go for detailed abdominal ultrasound for further evaluation. On the second day of admission, the patient passed stool, but her symptoms were not relieved, hence the USG abdomen and pelvis (both transabdominal and transvaginal) were done. In the suprapubic region superior to the uterus, there was a thin-walled cystic structure measuring 8 cms × 2 cms with no appreciable vascularity. The gravid uterus was seen to be lying on the right side of the abdomen. Moreover, the ovaries could not be seen separately. Subsequently, transvaginal USG was attempted, but the patient did not cooperate.

Even after the scan, the patient remained symptomatic; therefore, next day bed scan was repeated by the obstetric team and senior

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radiologist. The following findings were observed: single live fetus positive fetal heart rate and uterus being shifted to the right with a large left pelvic-abdominal mass measuring 10 cm × 10 cm. The structure looked echogenic.

The differential diagnoses were large posterior left-sided fibroid and ovarian mass. However, the presence of dilated recto-sigmoid-colon could not be excluded and needed to be reviewed by further imaging. The patient eventually passed a copious amount of stool, and on per rectal examination revealed persistent stool impaction.

A multidisciplinary team consisting of obstetrician, general surgeons, and radiologist, as well as the patient and family members, decided to carry out a Magnetic Resonance Imaging (MRI) scan. However, as the patient felt claustrophobic during the MRI scan, the multidisciplinary team had to recommend Computed Tomography (CT) scan for the best interest of the patient. Contrast-enhanced CT scan revealed marked colonic dilatation (up to 13 cm in diameter) loaded with fecal matter reaching up to the distal descending colon (Figure 1). Mural thickening of the distal descending, sigmoid colon, and rectum were also noted. No extraluminal air or contrast extravasation was detected, excluding perforated viscus.

Moreover, there were no signs/symptoms of sepsis; results of sepsis workup came back negative, implying only megacolon i.e., nontoxic megacolon.

The multidisciplinary team decided to manage the patient conservatively and to deliver the baby via elective cesarean section between 34 and 35 weeks to avoid rupture of the megacolon by prolonging the pregnancy.

The patient was discharged with advice to take laxatives and with adequate dietary modification with the involvement of dietician.

After about 1 week of discharge from the hospital, she followed regular antenatal care; however, at 30 weeks, she was admitted through an emergency with abdominal pain and a history of constipation.

After ensuring fetal well-being, her condition was assessed by the multidisciplinary team, and she was managed conservatively with laxatives.

The patient received steroids for fetal lung maturity and underwent elective lower segment cesarean section at 35 weeks of pregnancy.

Intraoperative findings revealed uterus being pushed to the right side by the distended bowels; right adnexal structures (fallopian tube

and ovary were within normal limits) and left adnexal structures were obscured by distended bowel loops. There were no adhesions.

The baby had Apgar's score of 5/8 and weighed 2500 gm with venous pH 7.31.

Post cesarean section, her stay was uneventful, and she was discharged on 4<sup>th</sup> postoperative day in stable condition.

On discharge, she was advised to be reviewed after 8 weeks with colorectal surgeons for further discussion and possible management plans.

## Discussion

Due to chronic symptomatology, characteristic clinical course, fear of relapse of the disease, and fear of genetic transmission of the disease to offspring, many patients of IBD prefer to avoid pregnancy [2].

Studies reveal that if conception occurs in IBD patients during the remission phase, the risk of relapse remains the same as for non-pregnant women. Hence patients are advised to conceive during the remission phase of the disease. However, if conception occurs during the exacerbation phase, there is an increased risk of relapse during pregnancy, along with an increased chance of stillbirth, pre-term delivery, and postpartum complications for both mother and neonate [5].

Pregnant patients suffering from UC are more likely to suffer from relapse compared to patients suffering from CD irrespective of age, smoking, pre-pregnancy disease state; past surgical history with regard to IBD related surgery, TNF, or immunosuppressive drug therapy [6].

In the case of CD, the clinical course remains unaffected by pregnancy status both during pregnancy and after delivery of the baby. However, in the case of UC patients, the chance of relapse (exacerbation) is significantly higher both during pregnancy and even after delivery of baby compared to non-pregnant females. In pregnant patients, relapse and complications usually occur during the first and second trimesters [3,7].

Here we describe a case of primigravida presenting with constipation in the third trimester. The patient was successfully managed conservatively with laxatives, and the baby was delivered via cesarean section. There were no postnatal complications for mother and baby.

There are several case reports describing cases of megacolon occurring in pregnant women; however, unlike those cases, our patient did not have any past history of IBD. Our patient did not have any symptoms/signs of sepsis (or intestinal perforation). This was also confirmed by contrast-enhanced CT abdomen, indicating that she only suffered from megacolon; hence, a conservative approach was adopted for management.

Although an MRI scan is a safer option in pregnant women compared to CT scans, in our case, as per the recommendation of the multidisciplinary team, a contrast-enhanced CT scan was performed for better evaluation of the condition (intestinal perforation, if any).

Similar to our case, Brunelli R and colleagues described a case of toxic megacolon and sudden onset of fetal decompensation in a pregnant woman who was diagnosed with new-onset UC during the third trimester [8].

Another case report published by Quddus A and his colleagues described the occurrence of toxic megacolon in a pregnant woman in the third trimester [9]; however, compared to our case here, the



**Figure 1:** Mega colon with marked dilatation of the descending colon showing no signs of bowel perforation.

patient was suffering from UC for 8 years.

In both cases, babies were delivered via cesarean section like our case; however, in the first case, like our case, the mother was managed conservatively as there was no evidence of colonic perforation. However, in the second case, unlike our case, total colectomy was performed on an emergency basis.

In our case, the decision regarding surgery was postponed for the time being, and the patient was advised on discharge to consult a gastroenterologist regarding the need for surgery.

The first-time attack of UC is rather uncommon during pregnancy but not completely unheard-of. Like our case, Brunelli R and colleagues and Orabona R and his colleagues also described similar cases [8,10].

In the case described by Orabona R and his colleagues, similar to our case, a pregnant female presented with features of toxic megacolon [10]. Similar to our case, the patient was managed conservatively, and the baby was delivered via cesarean section.

Therefore, consultation of a multidisciplinary team (consisting of obstetricians, surgeons, medical gastroenterologists, and radiologists) is very important for the management of these patients. In such cases, timely diagnosis and management of megacolon become essential for well-being of both the mother and the baby.

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