CASE REPORT

Chronic anorexia and weight loss due to extensive fibroid compression of the bowel: an unusual complication of uterine fibroids in a patient with a twin pregnancy

Bhaskar Narayan,¹ Fergus McCarthy,¹ Catherine Nelson-Piercy²

¹Department of Women's Health, Guy's and Saint Thomas' NHS Foundation Trust, London, UK

²Department of Women's Directorate Office, Guy's and St Thomas' NHS Foundation Trust, London, UK

Correspondence to

Professor Catherine Nelson-Piercy,
Catherine.Nelson-Piercy@gstt.nhs.uk

Accepted 17 April 2016

SUMMARY

A 36-year-old homeless Eritrean nulliparous woman was admitted to hospital, with abdominal pain, nausea and loss of appetite. She was found to be 17 weeks pregnant with dichorionic diamniotic twins. She was cachectic and had large palpable uterine fibroids. An extensive search for infection and malignancy did not yield any significant results. She was managed with enteral nutritional support and delivered healthy twins by emergency caesarean section at 36 weeks' gestation. She re-presented 19 days postpartum, with fever and abdominal pain. Imaging revealed multiple abdominal collections and large degenerating fibroids. At laparotomy, the fibroids were found to be adherent to, compressing and enveloping large sections of bowel. The patient required a right hemicolectomy, small bowel resection and total abdominal hysterectomy. Histology confirmed an infarcted leiomyoma and the patient made a good postoperative recovery.

BACKGROUND

Uterine fibroids are a common condition in women of childbearing age, occurring in up to 20% of women. Fibroids are associated with increased complications in pregnancy, including haemorrhage and obstruction in labour. There were several learning points from this case and it is important to draw attention to a complication that has not previously been described in the literature. It is of interest that the initial work up focused on malignancy and infection, highlighting that the clinical features of large fibroids can mimic other chronic intra-abdominal pathology. Finally, this case highlights the clinical dilemma facing obstetricians in balancing risks of operative abdominal delivery versus significant potential intrapartum vaginal complications.

CASE PRESENTATION

A 36-year-old nulliparous woman was admitted to hospital with abdominal pain, nausea and loss of appetite of 6 months' duration. Urinary β -human chorionic gonadotropin was positive and ultrasound revealed a viable dichorionic diamniotic twin pregnancy of 17 weeks' gestation. This was an unplanned pregnancy with complex social circumstances. This Eritrean woman had been living in the UK for 12 years and had been homeless for the past 2 years. She gave a history of diminished

appetite and poor access to food, resulting in loss of >10% of her body weight over 6 months. She denied consumption of alcohol, tobacco, or any illicit substances, and was not involved in prostitution. Her medical history was significant for uterine fibroids and female genital mutilation.

On examination, the patient was cachectic, and her weight was 49 kg (body mass index 17). She was without fever and her chest was clear. In addition to the gravid uterus, two large non-tender irregular mobile masses consistent with fibroids were palpable in the abdomen. There was no palpable lymphadenopathy.

Her poor nutritional state was initially attributed to poverty and lifestyle factors. She was started on oral nutritional supplements, and referred for social support in the community.

She was reviewed at 23 weeks' gestation in the antenatal clinic. She had ongoing anorexia and weight had fallen to 48 kg. Pelvic ultrasound confirmed large intra-abdominal masses consistent with fibroids, but due to her significant morbidity she was admitted for further work up.

On admission, she was noted to have iron deficiency anaemia (haemoglobin (Hb) 95 g/L, mean corpuscular volume 79 fL, serum iron 5 μ g/dL, transferrin saturation 8%). Renal function, electrolytes, liver function and thyroid function were all normal. Albumin was 33 g/L (normal for second trimester). C reactive protein was 38 mg/L and coeliac serology was negative. HIV and *Strongyloides* serology was negative, and stool microscopy was negative for parasites. Working diagnosis was malignancy of unknown origin.

An MRI scan of the abdomen and pelvis (see [figure 1A, B](#)) showed twin pregnancy, and two large uterine fibroids measuring 18 and 12 cm, respectively. Both had features of haemorrhagic degeneration, but no other concerning features. There was no evidence of bowel obstruction (although the bowel was being displaced by the mass—see [figure 1B](#)), no significant free fluid and no pathological lymphadenopathy.

In order to widen the search for suspected underlying cancer, several other investigations were performed. Chest X-ray was unremarkable. CT of the thorax was also performed, looking specifically for neoplastic lesions or pathological lymphadenopathy. This showed normal lung parenchyma with evidence of neither malignancy nor tuberculosis.

CrossMark

To cite: Narayan B, McCarthy F, Nelson-Piercy C. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-214858

Figure 1 (A) Axial slice from MRI (T2-weighted) at 23 weeks' gestation. (B) Sagittal slice from MRI at 23 weeks' gestation.

Upper gastrointestinal (GI) endoscopy showed gastritis and duodenitis with the presence of *Helicobacter pylori*. There were neither macroscopic nor histological features of malignancy.

The patient was treated with antibiotics to eradicate *H. pylori*, but in the absence of any identifiable malignant process, she was managed supportively with nasogastric feeding and iron supplements, and remained an inpatient for 8 weeks.

At 31 weeks' gestation, she was beginning to gain weight and was discharged to temporary accommodation. She then returned at 36 weeks' gestation, with spontaneous rupture of membranes. Twin A was cephalic and the patient was managed expectantly. Twenty-four hours after rupture of membranes, despite regular contractions, the cervix remained undilated. Following counseling, which included a discussion regarding augmentation with intravenous oxytocin, operative abdominal delivery, risks regarding caesarean section, particularly emergency caesarean section, and risks regarding potential obstruction of twin B if twin A were to be delivered vaginally, the decision was made to perform a category 3 caesarean section.

At caesarean section, the uterus was found to be adherent to the anterior abdominal wall on the maternal right side. The bladder was elevated with peritoneal adhesions. These were divided and a high uterine incision was made. Twin B (female weighing 2.45 kg) was delivered first, by breech extraction. Twin A (male weighing 2.32 kg) was delivered cephalic with difficulty due to an impacted head and pressure from the above fibroids.

Figure 2 (A) Axial slice of MRI (T2-weighted) at 19 days postpartum. (B) Sagittal slice of MRI (T2-weighted) at 19 days postpartum.

Owing to the extensive mass of the fibroids and their adherence to the abdominal wall, it was not possible to explore the abdomen further. The procedure was complicated by an estimated blood loss of 2.3 L secondary to bleeding from an extension to the uterine incision. The patient was transfused 2 units packed red cells in theatre and recovered in the high dependency unit.

The mother and her babies recovered well postoperatively and were discharged from hospital after 1 week.

She re-presented 19 days postpartum with a clinical picture compatible with sepsis. Temperature was 38.9 °C, and she was tachycardic at 142 bpm and hypotensive at 90/60 mm Hg. Her abdomen was distended and very tender. She was started on broad-spectrum antibiotics with a working diagnosis of sepsis. Investigation results were as follows: Hb 67 g/L, white cell count $9.4 \times 10^9/L$, C reactive protein 261 mg/L and albumin 22 g/L. Renal function, electrolytes and liver function tests were normal. Blood cultures were negative and urine cultures showed moderate growth (10^4 cfu/mL) of *Klebsiella pneumoniae*. Swabs of the abdominal wound showed heavy mixed growth of coliforms. Chest X-ray showed mild basal atelectasis but was otherwise unremarkable.

Repeat MRI scan showed multiple pelvic collections, including a collection within the caesarean section scar containing gas locules in keeping with an infected collection. This was in communication with a fluid collection in the uterine cavity, and

extended through the uterine serosa, into the anterior abdominal wall (see [figure 2B](#)). The fibroids were enlarged and the haemorrhagic degeneration had progressed (see [figure 2A](#)). It was not possible to assess the bowel in detail due to the sheer size of the fibroids and the extensive inflammatory fat stranding, but it was clear that the inflammatory masses were causing displacement and compression of the bowel (see [figure 2A](#)).

DIFFERENTIAL DIAGNOSIS

The relevant differential diagnoses in this case were malignancy (particularly ovarian cancer or cancers of the GI tract) and chronic infections (particularly tuberculosis, HIV and parasitoses). However, an extensive work up did not reveal any of these pathologies.

TREATMENT, OUTCOME AND FOLLOW-UP

In view of the deteriorating sepsis and confirmed intra-abdominal collections, the patient was taken to theatre for emergency laparotomy. This revealed a huge inflammatory mass, comprising of a pus-filled fibroid, densely adherent to loops of small bowel, transverse colon, abdominal wall, liver, gall bladder, stomach and duodenum, and enveloping the caecum. It was not possible to safely separate the fibroid from bowel, and a decision was made to proceed to right hemicolectomy, end ileostomy and mucous fistula formation, small bowel resection and total abdominal hysterectomy. The histology showed inflammatory changes and infarcted leiomyoma, but no evidence of malignancy.

The patient made a good postoperative recovery and, after a period of intense dietetic input and rehabilitation, her appetite returned and she continued to gain weight. She also found appropriate accommodation and is living with her twin babies. A reversal of the ileostomy is planned for 6–12 months postpartum.

DISCUSSION

In summary, our patient had two phases of her illness. The first phase was the persistent anorexia and weight loss that predated the pregnancy but worsened during pregnancy. She was extensively investigated for infection and malignancy but these were negative. In hindsight, the extensive compression of the fibroids to the stomach, duodenum and caecum were the cause of her anorexia, early satiety and weight loss.

The second phase was when she re-attended postpartum with peritonitis. This was due to a combination of caesarean section scar dehiscence and inflammatory necrosis of the large fibroids with resulting complications. It was only during the subsequent laparotomy that the reason for the first phase of her illness was appreciated.

Fibroids (leiomyomas) are benign tumours of the uterine smooth muscle and the commonest pelvic tumour in women. They are clinically apparent in approximately 20% of women of reproductive age and are more common in African women.¹

Most women with fibroids have uneventful pregnancies, but the literature does suggest that uterine fibroids are associated with an increased rate of complications such as spontaneous miscarriage, preterm labour, degeneration, malpresentations, caesarean section, and antepartum and postpartum haemorrhage.¹ Fibroids also increase the risk of complications following caesarean section, with increased rates of infection and haemorrhage.

The majority of fibroids do not change in size during pregnancy. A minority grow during the first trimester, and then reduce in size in the third trimester and puerperium.^{2 3}

However, our patient's fibroids did not follow this pattern; they had increased in size on the postpartum MRI scan, compared with the second trimester scan.

Large fibroids may cause gastrointestinal complications due to a physical mass effect and/or inflammatory changes. There have been reports of acute bowel obstruction requiring emergency surgery in pregnant^{4 5} as well as non-pregnant patients.⁶

However, our patient never developed acute obstruction, making it more difficult to come to a diagnosis. External compression of the bowel, and likely impaired peristalsis due to adherence to the gut wall, explain the chronic nature of her illness. *H. pylori* gastritis and the poverty and lifestyle factors may also have contributed. Ultimately this could only be resolved by surgically resecting the mass and the affected bowel after the patient presented acutely unwell postpartum. This rare complication of fibroids should be considered in the differential diagnosis of pregnant as well as of non-pregnant women presenting with chronic weight loss.

Patient's perspective

- ▶ The doctors and I had to weigh up the risks and benefits (to both me and the babies) of vaginal delivery versus caesarean section.
- ▶ I knew that the fibroids were large, but I did not expect so many complications after the caesarean section. The past year has been very tough for me and this is not how I expected things to turn out. The stoma in particular is difficult for me to come to terms with.
- ▶ However, the end result is that I have two healthy babies and although I had lots of complications, there may have been more serious complications from continuing to attempt a vaginal delivery that could have put me or the babies in danger. I am recovering well and I hope to have the stoma reversed later this year.

Learning points

- ▶ This is an atypical presentation of uterine leiomyomas causing chronic weight loss before and during pregnancy, due to extensive bowel compression, causing anorexia and malnourishment, but without frank bowel obstruction.
- ▶ Large, degenerating, inflammatory masses may be difficult to assess on imaging alone. The full extent of the bowel involvement was only apparent at laparotomy.
- ▶ Unexplained weight loss and anorexia should prompt a search for malignancy, but 'benign' masses such as fibroids may also cause significant morbidity and should be in the differential diagnosis when investigating these symptoms.
- ▶ Even twin fetuses can survive significant maternal malnourishment without restricting their own growth and development.
- ▶ Women with fibroids are at increased risk of haemorrhage and infection at caesarean section; emergency caesarean section is more risky than elective caesarean.
- ▶ In complex cases when both abdominal and vaginal delivery may result in potential significant fetal and maternal morbidity and/or mortality, careful counselling of the patient with multidisciplinary involvement is key to optimise maternal and neonatal pregnancy outcomes.

Acknowledgements Many thanks to Dr Audrey Jacques, Consultant Radiologist at St Thomas' Hospital, who assisted with the interpretation of the MRI.

Contributors BN wrote the first draft of the case report. BN, FM and CN-P edited and revised the article, and all the authors approved the final draft. CNP is the guarantor.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Lee HJ, Norwitz ER, Shaw J. Contemporary management of fibroids in pregnancy. *Rev Obstet Gynecol* 2010;3:20–7.
- 2 Aharoni A, Reiter A, Golan D, *et al.* Patterns of growth of uterine leiomyomas during pregnancy. A prospective longitudinal study. *Br J Obstet Gynaecol* 1988;95:510–13.
- 3 Rosati P, Exacoustòs C, Mancuso S. Longitudinal evaluation of uterine myoma growth during pregnancy. A sonographic study *J Ultrasound Med* 1992;11: 511–15.
- 4 Brazet E, Ghassani A, Voglimacci M, *et al.* Previa uterine leiomyoma: a rare case of bowel obstruction during pregnancy. *Gynecol Obstet Fertil* 2014;42: 806–9.
- 5 Macdonald DJ, Popli K, Byrne D, *et al.* Small bowel obstruction in a twin pregnancy due to fibroid degeneration. *Scott Med J* 2004;49:159–60.
- 6 Chaparala RPC, Fawole AS, Ambrose NS, *et al.* Large bowel obstruction due to a benign uterine leiomyoma. *Gut* 2004;53:386.

Copyright 2016 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- Submit as many cases as you like
- Enjoy fast sympathetic peer review and rapid publication of accepted articles
- Access all the published articles
- Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow