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(CASE REPORT)

When pregnancy masks an emergency: Pregnancy-related intestinal ischaemia – a diagnosis as rare as it is serious

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Abstract

Pregnancy is an extraordinary experience, but it can come with its share of discomforts. Abdominal pain is a common concern for many pregnant women. While some discomfort may be normal, it is essential to understand the different types of abdominal pain and know when they may indicate a more serious problem.

Abdominal pain during pregnancy refers to any discomfort or pain felt in the stomach or lower abdomen. It is a common symptom that can range in intensity from mild to severe.

Abdominal pain during pregnancy can be obstetric, gynaecological, urinary or related to the digestive tract. Some types of pain are normal during pregnancy, while others require urgent treatment.

When rarity complicates diagnosis, we report a very rare and exceptional case in pregnant women, pregnancy-related intestinal ischaemia, a rare emergency with maternal and foetal implications.

Keywords: Abdominal Pain; Compression; Ischaemic; Intestinal Necrosis

1. Introduction

Pregnancy is an extraordinary experience, but it can come with its share of discomforts. Abdominal pain is a common concern for many pregnant women. While some discomfort may be normal, it is essential to understand the different types of abdominal pain and know when they may indicate a more serious problem.

We report a very rare case of intestinal necrosis considered to be pregnancy-related in a woman in her third trimester.

2. Case presentation

A 34-year-old patient with no significant medical history, G4P3, 3 living children delivered vaginally, current pregnancy estimated at 36 weeks of amenorrhea (WA) + 5 days, not monitored, apparently normal progression, marked by the onset of abdominal pain syndrome 3 days before her admission to our facility, colic-like, sudden onset, permanent with paroxysmal attacks, of progressively increasing intensity, initially localised in the middle of the abdomen then spreading to the entire abdomen, slightly improved by symptomatic treatment, associated with vomiting and a feeling of fever without constipation, diarrhoea or cessation of bowel movements and gas. No urinary symptoms and no lumbar contact. The examination found the patient to be conscious, stable, normotensive, tachycardic at 110 bpm, apyretic with normal-coloured conjunctiva, with a soft abdomen without contracture and diffuse tenderness.

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2.1. Obstetric examination

Height corresponding to gestational age, BCF + at 180 bpm, no abdominal contractions, no bleeding, patient not in labour, RCF showing foetal tachycardia, Obstetric ultrasound showing GMFE, normal amniotic fluid, homogeneous fundal placenta without HRP cupula with satisfactory biometry.

A biological assessment obtained retrospectively showing Hb at 12, GB 25,000, CRP 170, the rest of the examination unremarkable.

After preparation, the patient was initially placed on symptomatic treatment and electrical monitoring, which showed foetal tachycardia associated with RCF abnormalities, hence the indication for a high route for an unassuring foetal condition. After delivery of a new male baby with an Apgar score of 8/10 then 10/10, exploration after hysterorraphia found a portion of the small intestine 3 cm from the angle of Treitz, 25 cm reddish, slightly blackened in places, this portion is well defined with clear edges and no upstream or downstream obstruction. (Photos 1 and 2) Visceral surgery consultation requested, no obvious aetiology, the ischaemic part was soaked in warm serum after checking vitality, with a decision to refrain from surgery and instead perform contact drainage, put the patient on antibiotics and closely monitor clinical and biological signs of peritonitis. The diagnosis of pregnancy-related intestinal necrosis, probably related to compression of the pregnant uterus, was retained.

The outcome was marked by good clinical and biological improvement.

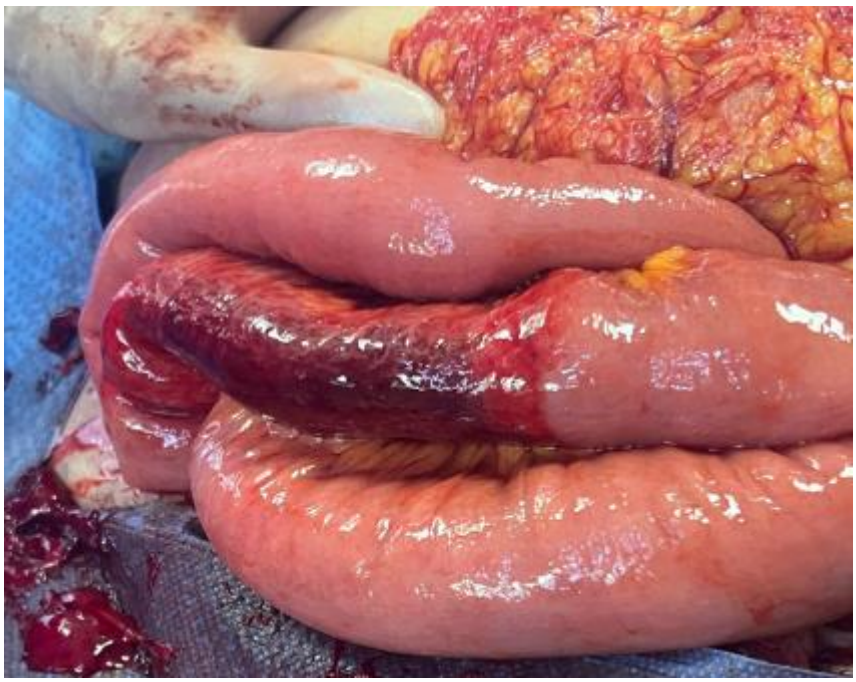

Figure 1 Photo of intestinal ischaemia

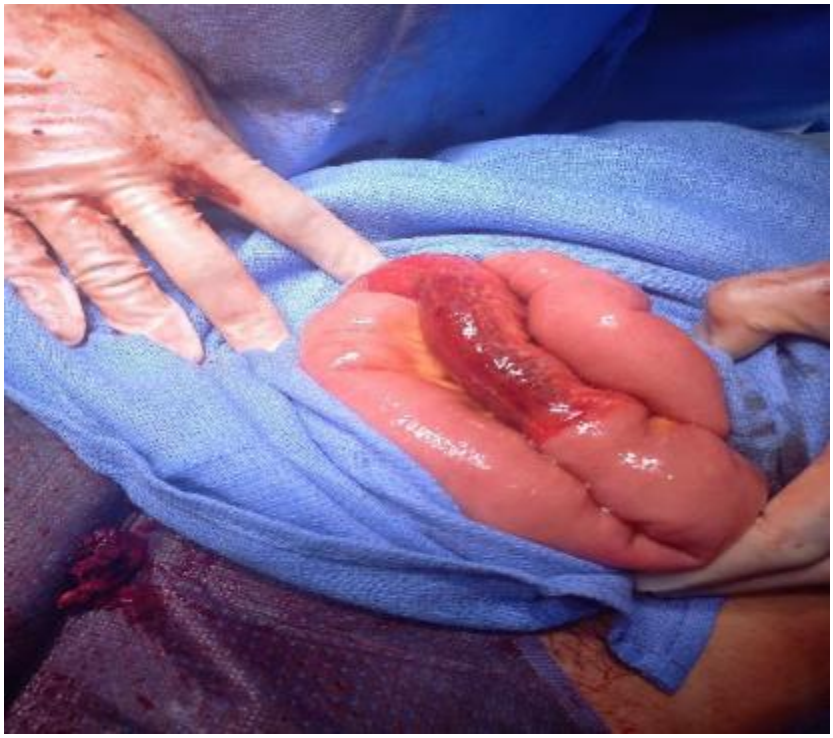

Figure 2 Photo after 30 minutes of extraction (a slight improvement in colouration can be seen)

3. Discussion

Abdominal pain during pregnancy refers to any discomfort or pain felt in the stomach or lower abdomen. It is a common symptom that can range in intensity from mild to severe.

Although some abdominal pain is normal during pregnancy, it is essential to be aware of the different types and their potential causes, as well as those that require urgent treatment.

Common causes of abdominal pain during pregnancy include:

- Implantation pain: In early pregnancy, when the fertilised egg attaches to the uterine lining, some women may experience mild cramping. This pain is often similar to menstrual cramps and usually subsides as the pregnancy progresses.
- Miscarriage: Severe abdominal pain, especially if accompanied by heavy bleeding (3), can be a sign of miscarriage. This pain is often cramping and may be localised on one side of the abdomen.
- Ectopic pregnancy: In an ectopic pregnancy, the fertilised egg implants outside the uterus, usually in a fallopian tube. This can cause sharp, intense pain and requires immediate medical attention.
- Ligament pain: As the uterus grows, the round ligaments that support it stretch and contract. This stretching can cause sharp, stabbing pain on one or both sides of the lower abdomen. It is usually brief and occurs during sudden movements.
- Gas and bloating: Hormonal changes during pregnancy can slow down digestion, causing gas and bloating. This can cause discomfort and a feeling of heaviness in the abdomen.
- Constipation: Pregnancy hormones can also affect bowel movements, leading to constipation. Straining or infrequent bowel movements can cause abdominal pain and cramps.
- Braxton Hicks contractions: Also known as practice contractions, Braxton Hicks contractions can occur as early as the second trimester. They are usually irregular, infrequent and painless, but can cause abdominal discomfort.
- HELLP syndrome, associated with pre-eclampsia complicated by a subcapsular haematoma of the liver or acute gestational steatosis: These can cause pain in the right hypochondrium.
- HRP: causing abdominal pain and bleeding. This is a serious condition that requires immediate medical attention.

Apart from obstetric causes, a pregnant woman is susceptible to all possible causes of abdominal pain in a non-pregnant woman, with approximately 0.2 to 1% of parturients requiring visceral surgery (1).

However, physical examination can be more difficult, particularly in the second and third trimesters. This is because the increase in uterine and foetal volume causes anatomical changes that make clinical examination less reliable, such as the location of the appendix, which may be in the right colic angle [2]. In addition, symptoms such as nausea and vomiting are frequently associated with pregnancy and may mask an underlying pathology. Similarly, anaemia and hyperleukocytosis may be found physiologically in blood tests [2].

However, all maternal abdominal pathologies, whether medical or surgical, must be diagnosed and treated without delay, otherwise foetal viability may be compromised.

Among the possible aetiologies other than obstetric ones, the following are cited, among others:

- **Adnexal torsion** complicates 1 in 800 pregnancies, typically in the first trimester but also in the second and third (4). The patient presents with sudden abdominal pain with nausea and vomiting, as in a non-pregnant patient. Suprapubic and/or endovaginal ultrasound is the examination of choice
- **Necrosis of a uterine fibroid** is another condition associated with pregnancy.
- **Renal colic** is the leading cause of hospitalisation in pregnant women, apart from obstetric causes [2]. Diagnosis is made difficult by anatomical changes due to pregnancy, with uterine dextrorotation. which causes dilation of the physiological straight pyelocaliceal cavities, particularly in the second and third trimesters of pregnancy.
- **Pancreatitis** occurs more often in the last trimester or immediately after delivery. It is often biliary in origin and is treated in the same way as in non-pregnant women.
- **Pelvic, mesenteric, hepatic (Budd-Chiari syndrome) or ovarian venous thrombosis** is rare but classic and occurs mainly from 36 weeks of pregnancy onwards and during the peripartum period. Mesenteric ischaemia of venous origin is difficult to diagnose due to insidious symptoms, pain that is difficult to localise and non-specific examination findings. However, it can lead to mesenteric infarction. MRI, and probably CT scan in particular, is essential and will confirm the diagnosis (5).

- **Splenic aneurysm rupture**: Hormonal impregnation has been implicated in the predisposition to splenic aneurysm formation or, more rarely, uterine aneurysm formation, through modification of the elastic properties of the arterial wall (6). This rupture occurs in the third trimester or during labour (7).

- **Appendicitis**. It is not promoted by pregnancy but remains by far the most common surgical emergency (1/1,500 pregnancies) with an identical incidence regardless of the trimester. Digestive symptoms and clinical signs also remain the same, with spontaneous and provoked pain most often occurring in the left lower quadrant, regardless of gestational age (28, 29). However, as the pregnancy progresses, signs of peritoneal irritation become more random (70%) and less localised, and the pain moves upwards and outwards above the iliac crest (30).

- **Biliary disorders** are the second most common cause of surgery during pregnancy, with an incidence of approximately 5/10,000. There is a predisposition to gallstones in 7% of nulliparous women and 19% of multiparous women (8). If surgery is indicated, laparoscopy is also possible during the first two trimesters (9).

- **Intestinal obstruction** is the third leading cause of surgery (1/3,000) and its incidence increases with gestational age (10). Nausea and vomiting after the second trimester or the second half of pregnancy should be cause for concern, especially if accompanied by signs on clinical examination. The causes are adhesions and, above all, volvulus (11). Strangulated hernias are rare and are more likely to occur in patients with a history of gastric bypass surgery (12).

To distinguish between common causes during pregnancy that require symptomatic treatment and those that may be serious and require urgent aetiological treatment, here are some symptoms that may indicate that abdominal pain is a cause for concern:

- Acute pain or cramping: Sudden, sharp pain or cramping, especially if it persists, may indicate a more serious problem.
- Severe pain: Intense pain that does not improve with rest may be a sign of a problem.
- Bleeding: Any bleeding associated with abdominal pain should be evaluated promptly by an obstetrician.
- Persistent pain: Pain that lasts a long time or worsens over time should be checked.

- Pain accompanied by other symptoms: Symptoms such as fever, nausea, vomiting, or dizziness accompanied by abdominal pain should be reported to a doctor.

Our case presents a very rare and exceptional condition that can cause abdominal pain during pregnancy, associated with other symptoms such as fever and vomiting, and which can mimic other abdominal conditions, whether medical or surgical. Our diagnosis of pregnancy-related intestinal ischaemia was made in consultation with visceral specialists and resuscitators, given the characteristics of the ischaemic portion of the intestine, the stage of pregnancy and the absence of any possible aetiology other than prolonged compression by the pregnant uterus on a specific portion of the intestine.

4. Conclusion

Abdominal pain is a common concern for many pregnant women. While some discomfort may be normal, it is essential to remember that a pregnant woman is susceptible to all the possible causes of abdominal pain in a non-pregnant woman. Our case presents an exceptional case of abdominal pain in pregnant women: pregnancy-related intestinal ischaemia.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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