

Sigmoid Volvulus & Pregnancy: Fetal Prognosis is She Still Severe?

Fahmi Y*, Bakouri A EL, Khaiz D, Bensardi FZ, Hattabi K, Berrada S, Lefriyekh R, Benissa N, Fadil A and Zerouali N

Service Visceral Surgical Emergencies (P35), CHU Ibn Rushd, Casablanca, Morocco

Abstract

The sigmoid volvulus is a rare complication of pregnancy seeing that less than 80 cases have been reported in the literature.

We report a case of a patient of 25 years, the Seventh month of her first pregnancy, admitted for occlusive syndrome.

The exploration was found viable sigmoid volvulus. She had received a colonic resection with colostomy Bouilly-Volkman. We report this observation to discuss the various diagnostic and therapeutic modalities of this rare association and assess fetal prognosis.

Keywords: Pregnancy; Volvulus; Sigmoid; Precocious diagnosis

Introduction

Bowel obstruction is less common during pregnancy (1/3600 pregnancies). As for patients outside of pregnancy, the etiology is most often associated with postoperative flange. Volvulus (A volvulus is a bowel obstruction of a loop of bowel whose nose has completely twisted around its site of mesenteric attachment) and Intussusception (it's a medical condition in which a part of the intestine has invaginated into another section of intestine) are the other causes of bowel obstruction [1]. Sigmoid volvulus is the second cause after occlusions on flanges. That being said, less than 80 cases have been published in the literature about this rare association [2]. Its diagnosis is difficult and prognosis essentially conditioned by early treatment [2,3].

Presentation of the Case

Miss HZ, 25 years old, primigravide nulliparous, having been admitted for occlusive syndrome for five days: diffuse abdominal pain that began at the left iliac fossa, bilious vomiting and absolute constipation.

The patient had no past medical history or surgical operation. Poor antenatal care and she was seen at 28 weeks' gestation. The clinical examination revealed a patient in poor general condition, with tachycardia, febrile to 38.58°C.

Abdominal examination revealed a distended abdomen with generalized tenderness. Uterine size was difficult to assess given the diffuse bloat.

On vaginal examination, the cervix was closed. Rectal examination reveals that the rectum was empty.

The fetal heart sounds were perceived to 130 beats per minute and recording the fetal heart rate at admission was perfectly normal.

The abdomen without prepartion has not requested given its radiating character, and we avoided the examination after obtaining the opinion of the gynecologists for safety. The abdominopelvic ultrasound found an evolutionary singleton pregnancy of 28 weeks gestation and an intraperitoneal effusion of average abundance.

Tocolysis with beta-mimetics was introduced parenterally after preparing the patient. The patient was operated urgently for strong suspicion of peritonitis.

We realized a median laparotomy, Surgical exploration had found a sigmoid volvulus twisted on two spirals (without necrosis) (Figures 1 and 2), and a peritoneal effusion little to moderate abundance of serous

appearance (liquid of suffering) that we have taken. Bacteriological study of the sample showed no germs. This exploration leading to the realization of a resection of the sigmoid loop then performing colostomy of Bouilly-Volkman (Figures 3 and 4). The postoperative course was uneventful: improvement of the general condition of the patient, colostomy was functional to d2 post-operative, the abdomen was soft. The patient was received antibiotic therapy: amoxicillin-clavulanic acid, metronidazole with tocolysis with Loxen 1tb (3 times daily) and the patient was followed well until normal vaginal delivery without complications at 38 weeks of gestation.

Just after her delivery, the patient underwent a restoration of colonic continuity which took place without complications.

Discussion

Acute intestinal occlusions are rare during pregnancy causes are multiple such as adhesions, appendicitis, volvulus or another.



Figure 1: Sigmoid volvulus with parietal suffering but without necrosis.

***Corresponding author:** Fahmi Yassine, Service Visceral Surgical Emergencies (P35), CHU Ibn Rushd, Casablanca, Morocco, Tel: 0664775577; E-mail: fahmi-yassine@hotmail.com

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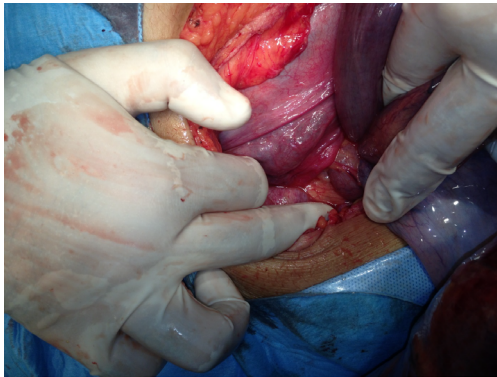


Figure 2: Image showing the zone of constriction.



Figure 3: The sigmoid colon after resection.



Figure 4: Bouilly wolkman colostomy after resection.

The occlusion by sigmoid volvulus is a rare entity, in fact, only 80 cases have been published in the literature [4]. Until today there is no hypothesis to explain this rare association, on the contrary there are some authors who say that pregnancy increases the risk of sigmoid volvulus.

It usually occurs during the third trimester of pregnancy but in immediate postpartum there are some cases that have been reported [5,6]. The physiopathologic mechanism is controversial.

For Elmasri, high frequency Africa dolichosigmoïde and its volvulus is associated with a rich vegetable fiber diet [7].

In the United States, sigmoid volvulus is mainly observed in patients

with chronic constipation dolichosigmoïde, its occurrence during the last months of pregnancy is due to the pull exerted by the uterus on a mobile tablet sigmoid part [8].

The major diagnostic difficulty is due to the reluctance and fear of caregivers to unnecessarily operate a pregnant woman. The sympathetic pregnancy symptoms are source of confusion and delay in diagnosis, leading to increased complications.

These can be major, as intestinal ischemia and septic shock, the maternal mortality rate is between 6 and 20% [3].

In case of peritonitis, complications are severe with a high fetal mortality (35%) [9]. It is mostly related to hematogenous perinatal infection. Concerning fetal morbidity, it is particularly high in the second trimester and is represented by premature delivery (40-80%) and spontaneous abortion (2%) [9].

The uterus, cervix, and annexes have the same innervation as the terminal ileum, sigmoid colon and rectum, from where the extreme difficulty to distinguish pelvic pain from a pain of intestinal origin [10].

Thus, the clinical symptomatology does not differ from that of a non-pregnant patient. It is made of abdominal cramping pain, paroxysmal crises occurring in four to five minutes, most commonly associated with a judgment of faeces and gas and vomiting [11].

During the first 14-16 weeks of a normal intrauterine pregnancy, nearly 50% of pregnant women presented nausea and 33% vomiting [12].

These nausea and vomiting normally regress toward the end of the first trimester. In case of persistent vomiting, especially after this period, we must mention the diagnosis of intestinal obstruction [13].

Examination of the abdomen is non-specific, biological analyzes are often inconclusive. Abdomen without preparation can confirm the diagnosis when it shows the classic appearance of air-fluid level double hoop. Moreover, it can find mixed hydroaeric levels or pneumoperitoneum if volvulus evolved and perforated [5,7,8].

The abdominopelvic ultrasound is the first-line diagnostic test for suspected intestinal obstruction. It allows to exclude bowel obstruction with a sensitivity of 89% and a specificity of 100%. Its safety allows repeated examinations to track the evolution of dilated bowel loops provided that the abundance of gas does not interfere with the realization of this examination.

Ultrasound can also detect the presence or quantify abundance of intraperitoneal fluid, suggestive of peritoneal irritation and/or small bowel stasis. It also helps to assess the bowel wall thickening, evidence of venous stasis, a debutante ischemia or infarction. Ultrasound can, finally, give a full assessment of the abdomen and pregnancy looking for other pathologies [5,12].

The scanner retains its interest as the gold standard in the occlusive syndrome exploration. Given its radiating character, we must replace it, whenever possible, by non-ionizing imaging technique. This is essential during organogenesis. Magnetic Resonance Imaging (MRI) imposes itself as a great alternative to laparotomy.

Several studies have shown the benefits of MRI vs scanner in managing occlusive syndromes [14,15]. Both tests have several objectives: to confirm the diagnosis of organic occlusion, determine as much as possible the causes, mapping the lesion level, and finally searching signs of severity: peritonitis and / or parietal pain [16].

The main purpose of the therapeutic management is to reduce

mortality and maternal-fetal morbidity. In the absence of State of shock or signs of peritonitis, colonoscopic untwisting should be preferred to the untwisting with the tube of Faucher, necessarily made under fluoroscopy so radiant. In case of failure of this untwisting (over 50%) or in the presence of shock signs of peritonitis, secondary surgical Sigmoidectomy is required.

Upon successful untwisting, some authors recommend to perform a diferred Sigmoidectomy during the second trimester of pregnancy, if the volvulus occurred during the first trimester [4,17]. Tocolysis is systematic, it is recommended for any abdominal surgery during the second and third trimesters of pregnancy [5].

Fetal prognosis is always bad, which is not the case in our observation where we have preserved the fetus and pregnancy by early care and adequate and good cooperation with gynecologists and intensivists.

Conclusion

The sigmoid volvulus is a rare event during pregnancy. Often frustrating symptoms causes a delay in diagnosis. Where the importance of close collaboration between the various stakeholders: obstetricians, surgeons and radiologists for good and early management to reduce foetomaternal mortality and morbidity.

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