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Case Study

Pelvic Colon Volvulus Complicating Pregnancy: About Two Cases

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Abstract

Introduction: Pelvic volvulus complicating pregnancy is a rare association. Our objective is to review the literature concerning the management of this association from 2 clinical cases.

Observation: We report 2 cases of pelvic colon volvulus. The first concerned a 32-year-old patient, gravida 5 and para 4 who was received in the emergency department for colonic-type abdominal pain at 32 weeks of gestation + 02 days according to the obstetrical US. The abdominal X-ray showed an inverted U-shaped image. A laparotomy shows a non necrotic pelvic colon volvulus associated with pregnancy. We performed caesarean section and sigmoidectomy with immediate end-to-end anastomosis. The operative follow-ups were simple.

The second concerned 1 patient who presented in the aftermath of a vaginal delivery, an occlusive syndrome that evolved 48 hours after delivery. She had bilious vomiting, abdominal pain and absolute constipation. The abdominal X-ray showed an inverted U-shaped image. A laparotomy showed a non-necrotic pelvic colon volvulus. We also found a lack of allotment of the entire colon on the mesentery and a pregnant uterus.

A sigmoidectomy and a temporary colostomy were performed with restoration of digestive continuity 15 days after. The operative follow-ups were simple.

Conclusion: Pelvic colon volvulus complicating pregnancy is a double emergency requiring multi-disciplinary care of the mother and the child.

Keywords: Pelvic Colon Volvulus; Pregnancy; Sigmoidectomy

Introduction

The association of pelvic colon volvulus and pregnancy is rare. This is a dual surgical emergency which affects the maternal-fetal prognosis [1]. The objective of our work is to show the diagnostic difficulty of this association through two medical observations.

Our observations

Observation 1

This is a 32-year-old patient, with no particular pathological history, who was admitted to the emergency room for occlusive syndrome for 2 days. Physical examination showed an altered

general condition with a fever of 38.5°C, blood pressure of 110/70 mm Hg and pulse of 88 beats/min. The abdominal examination revealed an asymmetric meteorism. The rectal ampoule was empty. The gynecological examination showed a long, posterior, closed cervix. The uterus was difficult to assess given the abdominal distension.

Abdominal x-ray (ASP) showed colonic distension with a double-legged gas arch as shown in Figure 1.

Figure 1: X-ray of the abdomen without preparation.

The pelvic ultrasound showed a single-fetal pregnancy lasting 32 weeks + 02 days. The biological assessment showed a leukocyte count of 9600 elements/mm^3. The hemoglobin level was 9.7g/dl. The hematocrit was 30.6%.

The diagnosis of pelvic colon volvulus complicating the pregnancy was made. Exploration, by median xypho-pubic laparotomy, revealed a non necrotic pelvic colon volvulus with 2 turns in a counterclockwise direction (Figure 2).

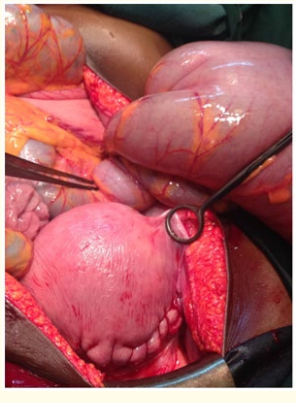

Figure 2: Volvulus of the pelvic colon with 2 turns counterclockwise.

A cesarean section and a sigmoidectomy with immediate end-to-end anastomosis were performed at the same time. The extracted fetus had a birth weight of 2300 grams and an APGAR score of 3/10.

The postoperative course was simple for the patient with lifting on day 1, resumption of transit on day 4 and discharge of the patient on day 6. The newborn was admitted to the pediatric intensive care unit. He died on day 5 of life due to respiratory distress with multiple respiratory arrests, the last of which lasted more than 20 minutes.

Observation 2

A patient was admitted to the emergency room for occlusive syndrome which had evolved over 48 hours before her admission, following a vaginal delivery of a healthy newborn. The picture began suddenly with paroxysmal abdominal pain with cessation of materials and gases. The clinical examination showed a painful, tympanic abdomen with asymmetrical distension (Figure 3). Uterus height was difficult to assess due to meteorism. Rectal examination showed an empty rectal ampoule.

Figure 3: Asymmetrical abdominal distension (photo Dr Ka).

The blood count showed hyperleukocytosis with a neutrophil predominance at 17,700/mm^3. The unprepared abdominal X-ray showed a typical appearance of volvulus (Figure 4).

The diagnosis of pelvic colon volvulus has been made. Exploration showed a volvulus with 2 turns clockwise. The sigmoid colon was distended but viable after detorsion (Figure 5). The

Figure 4: Abdominal x ray showing volvulus (Photo Dr Ka).

rest of the exploration showed a globose uterus and a transverse dolichocolon (Figure 6).

Figure 5: Distended sigmoid colon (photo Dr Ka).

Figure 6: Globular uterus and transverse dolichocolon (photo Dr Ka).

We performed a sigmoidectomy and a temporary colostomy with the 2 edges stitched to the skin. The postoperative course was simple. Digestive continuity was restored on postoperative day 15 with simple outcomes.

Discussion

Sigmoid volvulus is rare in non-gravid women of childbearing age. It occurs most often in pregnant women in the third trimester. Harar thinks that as the uterus increases in volume, it elevates the sigmoid. This results is partial obstruction, either due to pressure or kinking of the intestine [1].

Sigmoid colon volvulus is the leading cause of obstruction during pregnancy (42%) [2]. The persistence of the common mesentery?? not described in the patient's findings is rare in adults (0.5%) since it is discovered in 80% of cases in the first 2 weeks of life and constitutes a factor in the occurrence of volvulus of the pelvic colon [3].

The diagnosis of intestinal obstruction during pregnancy is often delayed because the symptoms mimic other pregnancy complications [4]. This is the case in our study where the picture evolved over 4 days and was confused with the start of labor in one of our patients. An ultrasound examination can help in the differential diagnosis. Unprepared abdominal radiography shows a typical appearance of occlusion in 91% of cases and the usual dose of 0.001 Gy per examination carries a negligible risk for the fetus during the third trimester [4]. Therefore, abdominal x-rays without preparation can be carried out without risk and even repeated.

Reduction by rectoscope (limited by the height of the coil) and reduction by flexible endoscope are successful in 80 to 96% of cases. Endoscopic treatment in the absence of perforation or necrosis prepares the patient for postpartum cold sigmoidectomy [5,6]. Surgery in 1 or 2 stages is possible after lung maturation and fetal extraction [7]. In one of our patients, the unavailability of emergency endoscopy and the absence of necrosis or colonic perforation pushed us to perform an ideal sigmoidectomy [8].

However, the maternal-fetal prognosis is guarded with a mortality of 26% for the fetus and 6% for the mother, linked to diagnostic delay [9,10]. This is the case in our study where the fetus died following the cesarean section, on day 4 of life, with respiratory

distress and multiple respiratory arrests, the last of which was greater than 20 minutes. This suggests that lung maturation was not effective or that the child had a lung malformation. An autopsy could have clarified the situation but it was not carried out.

Conclusion

Pelvic colon volvulus complicating pregnancy is an emergency requiring multidisciplinary care for the mother and fetus. Ideal sigmoidectomy is possible if there are no complications. However, access to emergency endoscopy could help prepare the patient for cold sigmoidectomy postpartum and reduce complications.

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