CLINICAL VIGNETTE

Acute Appendicitis in a Parturient at Term

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Case Presentation

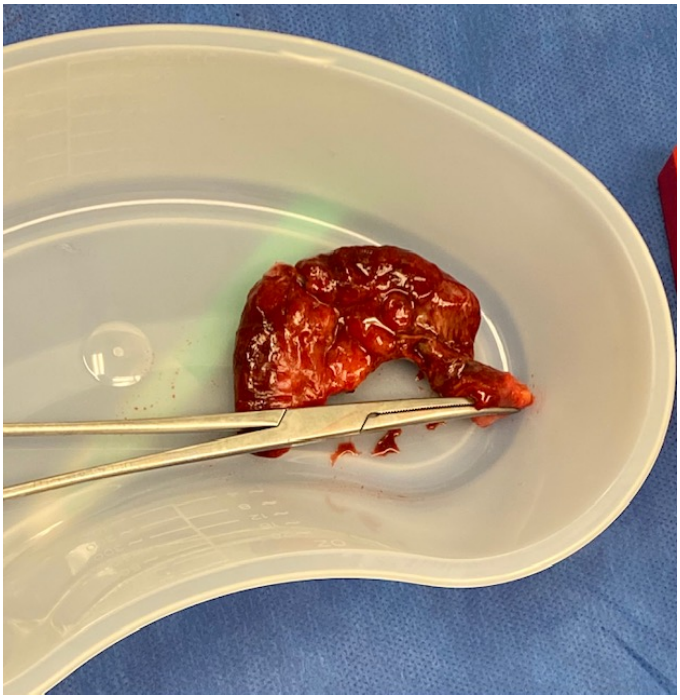
A 35-year-old G3P2 at 39 weeks and 2 days presented to labor and delivery with nausea, fever, abdominal pain, and poor PO intake. The patient reported a one-day history of nausea and vomiting. Her abdominal pain began as localized pain to the right lower quadrant (RLQ) and progressed to generalized abdominal pain. While she reported contractions, she denied that the contractions were painful.

On exam, her abdomen was tender to deep palpation in the RLQ. There was no rebound tenderness or guarding. Her maximum temperature was 37.9 degrees Celsius. Lab included normal coagulation studies and her white blood cell count of 11.0×10^9/L, which is within normal limits during pregnancy and labor. Despite her normal coagulation studies, placental abruption was at the top of the obstetric team's differential diagnosis given the RLQ pain, contractions, and fetal tachycardia. Also, on the differential was appendicitis (RLQ pain and fever), as well as intact intra-amniotic infection (fever in pregnancy and fetal tachycardia). Labor was also considered to be a possibility. However, because the pain was constant and not associated with contractions as viewed on the tocometer and the cervical exam remained unchanged, it was deemed unlikely.

The patient was started on empiric antimicrobial therapy with ampicillin, gentamycin, and clindamycin for possible intact chorioamnionitis.

Vital Signs were as follows:
Maternal Heart Rate: 120-140 beats/minute
Maternal Blood Pressure: 100/65 mmHg
Fetal Heart Rate: 180-210 beats/minute

Given the fetal category II fetal heart rate tracing (profound fetal tachycardia with minimal variability in a patient who was deemed to be remote from delivery, the obstetric team elected to proceed with a repeat cesarean section. The cesarean section was performed under spinal anesthesia and a vigorous infant was born with Apgar scores of 8 and 8 at 1 and 5 minutes. Upon evaluation, the appendix was noted to be inflamed and gangrenous without perforation. A large appendicolith was noted at the base of the appendix. General surgery was consulted intraoperatively and recommended an appendectomy for acute appendicitis. This recommendation was discussed with the patient and she desired to proceed. The appendectomy was performed and the cesarean section was completed uneventfully. Later that same day, the patient's blood cultures were positive for E. coli, and she was subsequently transitioned to ceftriaxone. There were no postop complications and the patient was discharged home on postoperative day four.



Discussion

Acute appendicitis is the most frequent non-obstetric or gynecologic surgical emergency in pregnancy.[1,2] During pregnancy, appendicitis occurs most frequently in the 2nd trimester and least frequently in the 3rd trimester.[3]

It can be challenging to diagnose appendicitis in pregnancy for various reasons. First, symptoms of acute appendicitis (abdominal pain/gastrointestinal discomfort and leukocytosis) overlap with those of pregnancy and labor. Second, ultrasound has poor sensitivity for appendicitis in pregnancy, and, the reluctance to perform a CT scan due to fetal radiation exposure, make imaging confirmation extremely limited. MRI has a high sensitivity and specificity when used, although it may not be readily available.[4]

Standard treatment for appendicitis in pregnancy is an appendectomy. Making a prompt diagnosis and removing the infected

appendix urgently is of utmost importance in pregnancy. Delaying surgery more than 24 hours after the onset of symptoms increase the risk of perforation substantially.[5] Notably, the rate of fetal loss increases from 1.5 percent without perforation to 36 percent with perforation.[6]

Cesarean delivery is rarely indicated at the time of appendectomy. However, for the case described above, the fetus was at term and the concerning fetal heart rate tracing remote from delivery required an urgent cesarean section.

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