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Case Report

An unusual case of appendicitis in full term pregnancy presenting as sudden intrauterine fetal death with maternal shock

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Introduction

Appendicitis occurs once in 1500 pregnancies, more commonly in the first and second trimesters [1]. Pregnancy continues to obscure the accurate diagnosis of acute appendicitis due to gestational physiological changes with symptoms of anorexia, nausea and vomiting [2]. Delay in diagnosis and definitive treatment represents the most common reason for poor outcome for mother and fetus. We report an unusual case of appendicitis in full term pregnancy with previous cesarean section, which presented as a case of sudden intrauterine fetal death with unexplained maternal shock.

Case report

A 28 year old G_3P_2 came for antenatal care. Her 1st pregnancy was terminated at 22 weeks for anencephalic fetus. The 2nd pregnancy resulted in term cesarean delivery 2 ½ years back with a live and healthy baby.

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Her last menstrual period was on 13th January, 2005. She had regular antenatal checkups at 6 – 8 weeks intervals. Her clinical examinations and routine antenatal pathological investigations were within normal limits, except hemoglobin of 9.4 g/dL. Sonography at 22 weeks showed normal fetal biometry with normal liquor and fundal placenta. She had no specific complaint except mild heart burn.

On 7th October she came for antenatal checkup complaining of mild vague pain in the abdomen and loss of appetite. Her pulse was 92, blood pressure 110/70 mm/g, and fundal height corresponding to 36 weeks gestational age. The lie was minute, longitudinal, presentation cephalic and fetal heart 138 beats/minute and regular vaginal examination showed closed os and head at – 1 station with mild cephalopelvic disproportion. She was advised to take antacids for heart burn and come for elective cesarean section later in the same week.

On 13th October 2005 she came at 6 am, in emergency with complaints of vomiting and epigastric pain since 4 am and loss of fetal movements. Her pulse was 110/minute, blood pressure 94/60 mm of Hg. She was moderately pale. Her, abdomen was tense and tender. Fetal heart sounds were not heard. On vaginal

examination the os was closed and the presenting part was high up. Emergency ultrasound showed absent fetal cardiac activity with minimal fluid in the abdominal cavity.

Diagnosis of intrauterine fetal death possibly due to placental abruption or scar dehiscence was made. Intravenous fluids and antibiotics were given and preparations for cesarean section undertaken.

Suddenly she had severe pain in the abdomen and her pulse and blood pressure became unrecordable. Dobutamine drip was started and immediate laparotomy performed.

On opening the parietal peritoneum there was a sudden gush of straw color thick fluid. After sucking the fluid, a still born female baby was delivered through a lower uterine segment transverse incision. There was no retro placental clot and uterus was well contracted after delivery of the placenta.

The abdomen was explored with the help of a surgeon. At first bowels, liver, spleen and stomach appeared normal. But there were multiple pockets of straw color thick fluid. On a 2nd look in the right paracolic region a purulent plaque was found, which was carefully dissected. Beneath the plaque a swollen and necrotic appendix was found. Appendicectomy was performed. Drain was inserted and abdomen closed in layers.

During surgery she was given 2 units of blood transfusion, dobutamine drip, and antibiotics. Her pulse ranged from 120 to 160/minute, urine output was 400 mL and blood pressure remained between 80 and 94/50 mm of Hg.

After one hour of surgery her pulse and blood pressure again became unrecordable, though her color and level of consciousness were normal. She was given hydrocortisone intravenously 6 hourly, amoxicillin clavulanic acid, tobramycin, metronidazole, blood transfusion, dobutamine drip and intranasal oxygen.

Her pulse and blood pressure slowly improved in the next 2 hours and she made a good recovery. Drain was removed on the 5th day, and stitches on the 10th day. She was discharged on the 10th day. Histopathological report of the appendix was acute on chronic appendicitis Figures 1,2, 3.

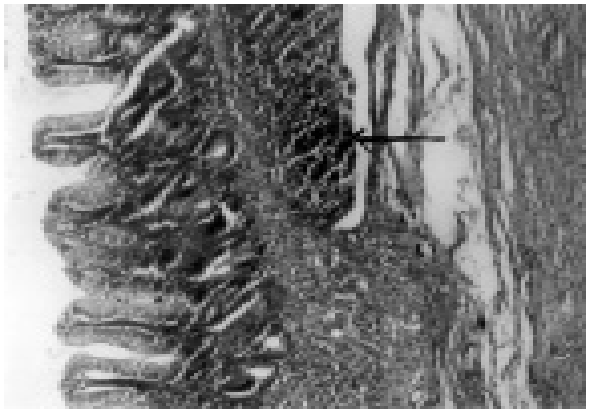

Figure 1. Low power magnification of appendicular wall (10x) showing mucosal lining and underlying lymphoid follicle ↑ (Stain H & E)

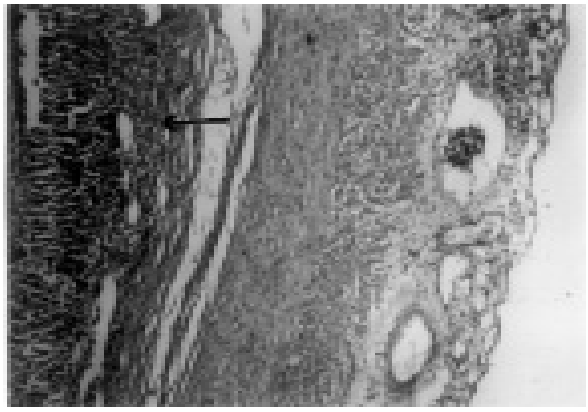

Figure 2. Low power magnification of appendicular wall (10x) showing lymphoid follicle (mark by) and infiltration with inflammatory cells (Stain H & E)

Figure 3. High power magnification of appendix (40x) showing infiltration with chronic as well acute inflammatory cells (Stains H & E)

Discussion

Appendicitis is one of the most common nonobstetrical surgical emergencies in pregnancy. Pregnant woman with appendicitis presents unique challenges. Pregnancy obscures and delays the diagnosis of appendicitis[3] because of the following -

1. Physiological positional change of appendix in pregnancy
2. Certain vital signs and symptoms are attributed to pregnancy itself.
3. Pregnant abdomen masks classical findings of appendicitis.
4. Obstetric causes of acute abdomen are considered first by the obstetrician.
5. Ultrasonography has limited role in the diagnosis of appendicitis and x-ray carry teratogenicity.

Delay in the diagnosis of appendicitis during pregnancy can cause significant maternal morbidity and mortality[3]. Studies have reported fetal loss ranging from 2% to 26% in cases of appendicitis before and after surgery[4,5]. Fetal mortality rate seems to be related to severity of maternal disease [5].

Appendicitis should always be considered when pregnant woman presents with abdominal pain, nausea, vomiting and fever, and laparotomy should not be delayed despite the fact that negative laparotomy rate is as high as 40%[2].

Our case had atypical presentation at term, rapid sequence of maternal and fetal complications, difficulty in diagnosis even at laparotomy and postoperative complications.

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