

CT diagnosis of spontaneous uterine rupture at term, sonographic appearance of which was confused with placenta praevia

Rohit Bhoil, Mukesh Surya, Kewal Arunkumar Mistry

From Department of Radiodiagnosis, Dr. RPGMC Kangra, India

Correspondence: Dr. Rohit Bhoil · Department of Radiodiagnosis, Dr. RPGMC Kangra, India · T: +91-9418021905 · rohitbhoil@gmail.com · ORCID: <http://orcid.org/0000-0002-5155-8325>

Ann Saudi Med 2016; 36(6): 440-441

DOI: 10.5144/0256-4947.2016.440

Spontaneous rupture of uterus during pregnancy is a rare occurrence.^{1,2} The diagnosis is not always obvious and morbidity and maternal and fetal mortality is high.³ We report an unusual case of spontaneous uterine rupture at term with fetal death which was confused on ultrasound with placenta praevia, the diagnosis of rupture being confirmed on CT scan.

A 24-year-old primigravida presented at 37 weeks gestation with complaints of gradually increasing pain in her right lower abdomen and vomiting for 3 days and mild vaginal bleeding for one day. She also had complained of decreased fetal movements for one

day. She was referred to our institution from a peripheral center where ultrasound was not available with the suspicion of acute appendicitis. At the time of presentation her pulse was 86 beats per minute, blood pressure was 116/72 millimeters of mercury and her temperature was 100 F (38.3°C). On examination, tenderness was noted in her right lower abdomen.

Laboratory investigations revealed a hemoglobin level of 8.5 grams per deciliter, haematocrit of 28% and a white blood cell count of 21 000 per cubic millimeter. She gave a history of two previous episodes of mild bleeding at 28 and 32 weeks for which she did not seek any medical advice. No previous ultrasound was done in this pregnancy. She also gave a history of uterine surgery for removal of fibroids in the lower-segment of her uterus two years previously.

Ultrasound in emergency revealed fetal demise with the gestational age being 36 weeks and 3 days by femur length. The placenta appeared to completely cover the os (**Figure 1**). A large amount of free fluid was also noted in abdomen and pelvis (**Figure 2**). These sonographic features were interpreted as placenta praevia with possible rupture of the appendix by the resident on duty. However, the second resident interpreted it as rupture of the uterus; the mass appearing as placenta covering the os was in fact the contracted and empty uterus (**Figure 1**). To confirm the findings an urgent non-contrast CT scan was done, which revealed uterine rupture with expulsion of the fetus in the peritoneal cavity; the site of rupture being located anteriorly in the lower segment of the uterus (**Figures 3 and 4**). Approximately 1500 mL of blood was drained by emergency exploratory laparotomy. The defect in the anterior uterine wall was repaired. Subsequently the patient was discharged after 8 days.

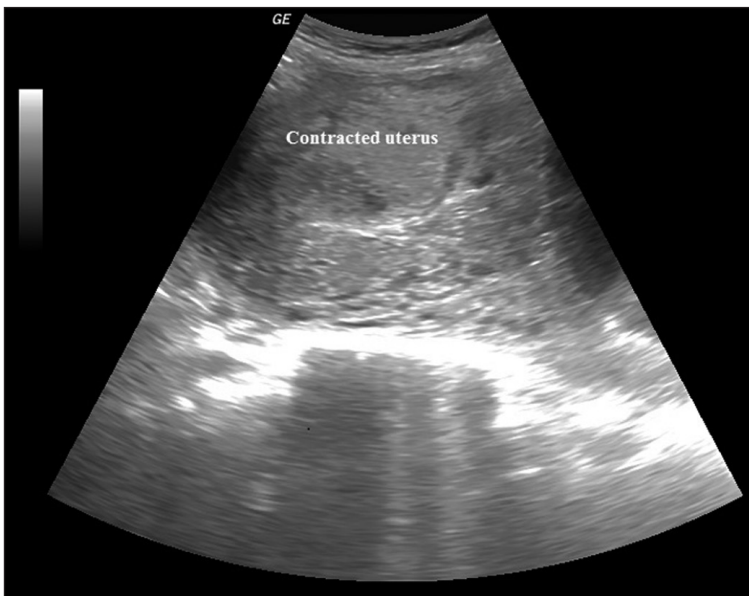


Figure 1. Uterine rupture in a 24-year-old woman at term; ultrasound scan of the pelvis revealing the empty and contracted uterus (this sonographic appearance was confused with placenta praevia).

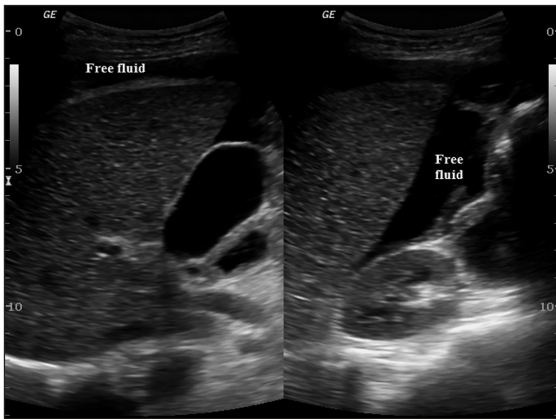


Figure 2. Transabdominal ultrasound image of the abdomen revealing large amount of free fluid in perihepatic, pericholic and in Morrison's space.

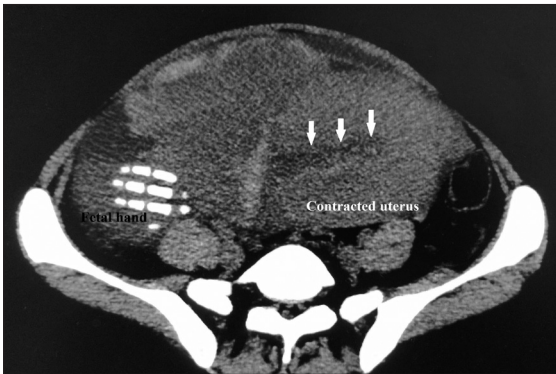


Figure 3. Axial CT scan image showing the site of rupture (arrows); fetal hand is seen outside the uterine cavity.

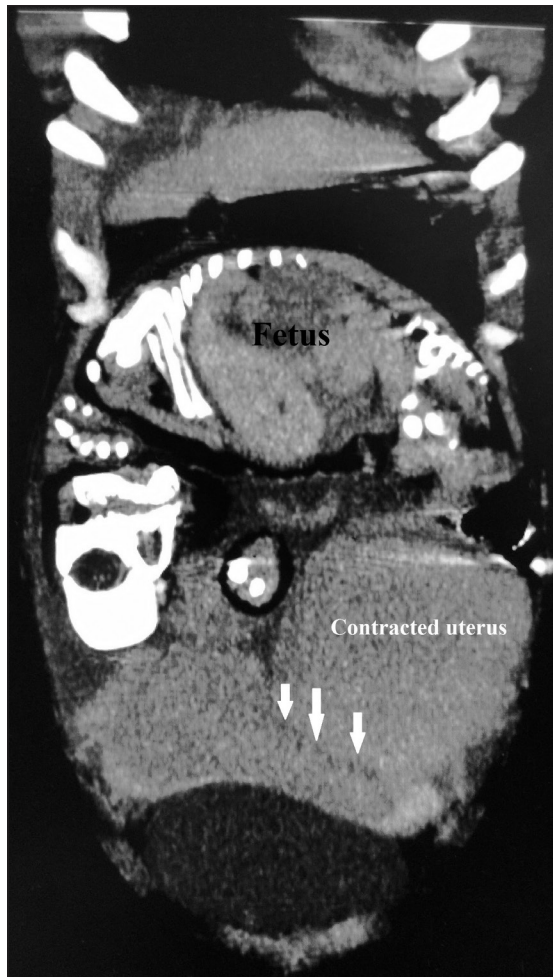


Figure 4. Coronal CT scan image showing the site of rupture (arrows); fetus is lying outside the uterine cavity.

Spontaneous rupture of uterus is an unpredictable event, requiring a high index of suspicion for diagnosis. Generally a past surgical history is present as was seen in our case.⁴ Usually the site of spontaneous rupture is the upper segment,⁵ but the lower seg-

ment ruptured in our case, which may have been due to the previous surgery for lower segment fibroids. A high index of suspicion is required in pregnant women presenting with abdominal pain, especially if there is a history of uterine surgery.

REFERENCES

1. Sun HD, Su WH, Chang WH, Wen, L, HuangBS, Wang PH. Rupture of a pregnant unscarred uterus in an early secondary trimester: A case report and brief review. *J Obstet Gynaecol Res* 2012; 38:442-445.
2. Dane B, Dane C. Maternal death after uterine rupture in an unscarred uterus: a case report. *J Emerg Med* 2009; 37:393-395.
3. Sakr R, Berkane N, Barranger E, Dubernard G, Darai E, Uzan S. Unscarred uterine rupture—case report and literature review. *Clin Exp Obstet Gynecol* 2007; 34(3):190-192.
4. Wang YL, Su TH. Obstetric uterine rupture of the unscarred uterus: a twenty-year clinical analysis. *Gynecol Obstet Invest* 2006; 62(3):131-135.
5. Bagga R, Chaudhary N, Kalra J. Rupture in an unscarred uterus during second trimester pregnancy termination with mifepristone and misoprostol. *Int J Gynaecol Obstet* 2004; 87(1):42-43.