



## Case Report

# Spontaneous uterine rupture at 20 weeks gestation

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### Introduction

The reported incidence of spontaneous uterine rupture is about 1 in 15,000 deliveries<sup>1</sup> and it is more likely in women of high parity. The weakening of the uterine wall results from fibrosis following bruising, stretching or tearing of the uterine muscles in previous labors. Spontaneous rupture during pregnancy is usually complete and involves the upper segment. We report a rare case of spontaneous uterine rupture that occurred at 20 weeks gestation.

### Case report

A 32-year old unregistered grandnullipara (G<sub>5</sub> P<sub>4</sub> L<sub>4</sub>) presented with 5 months amenorrhea and complaints of vaginal bleeding for past 2 days with mild pain in lower abdomen.

Obstetrical History: She had four previous full term normal deliveries at home and the children are healthy and 9, 6, 5 and 2 years old respectively.

There was no history of any trauma, fall over abdomen, any attempts at abortion with instrumentation, or any surgery involving the myometrium like myomectomy in the past.

On admission her general condition was poor. She was pale with pulse rate of 100/min. and blood pressure of 100/70 mm Hg. There was mild distension with generalized tenderness in lower abdomen. The bowel sounds were present. The fundal height corresponded to 22-weeks of gestation but uterine contour was not well defined and fetal parts could not be appreciated. The uterus was tender on palpation. Vaginal examination showed that the external os was patulous, internal os was admitting one finger and there was slight amount of bleeding.

### Investigations

Hemoglobin was 7 gm% and blood group was A +ve. Bleeding and clotting times, liver and kidney function tests and urine examination were within normal limits.

Sonography revealed enlarged uterus deviated to left side with no evidence of uterine pregnancy. A single dead macerated (old IUD) fetus of 20 weeks gestation was seen outside the uterus in the pelvis on the right side (Figures 1 and 2). An emergency laparotomy revealed hemoperitoneum with signs of infection. An old macerated fetus with placenta was seen lying in the abdominal cavity.

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About 4-5 cms long linear rupture was seen on the right lateral wall of the uterus. The macerated fetus with placenta, along with foul smelling clots and blood was removed and the uterine rupture was repaired. There were extensive adhesions of bowel loops with the uterus and identification of tubal anatomy was also difficult. In the presence of gross intraperitoneal infection and inflamed tissues it was considered unwise to dissect the adhesions. Hence, no attempt was made to do a hysterectomy and even to do tubectomy. Abdomen was



**Figure 1a & 1b.** Transabdominal pelvic sonographic pictures showing single dead macerated fetus of 20 weeks gestation in the pelvis on right side outside the uterus.

closed with a drain. The post-operative period was uneventful and the patient recovered well. Laparoscopic tubectomy was done after 6 months without much difficulty.

## Discussion

Uterine rupture, a potentially life threatening condition for both mother and fetus occurs in <0.1% of all pregnant

women <sup>2,3</sup> and in < 1% of women attempting vaginal birth after cesarean section (VBAC)<sup>4,5</sup>. Uterine rupture is a catastrophic tearing open of the uterus into the abdominal cavity. Its onset is often marked only by sudden fetal bradycardia, and treatment requires quick surgical attention for good neonatal and maternal outcomes. Many clinical conditions have been associated with uterine rupture. Labor is usually, but not always, required for uterine rupture. One third of ruptures in patients with a previous classic uterine incision occur before the onset of labor. Grand multiparity is an important risk factor for uterine rupture. Eden et al <sup>6</sup> and Adanu and Obed<sup>7</sup> reported 83.3% and 75.3% cases of uterine rupture occurring in multiparas with unscarred uterus respectively. Mid trimester uterine rupture is rare <sup>8</sup>. It is indeed rare for an apparently uninjured or unscarred uterus to give way during pregnancy <sup>9</sup>. Excessive uterine stimulation can cause rupture, and this has occurred with alkaloidal cocaine abuse. Oxytocin is widely used, so it is not surprising that this uterine stimulant has been administered in a majority of ruptures <sup>10</sup>. Misuse of oxytocin carries significant risks, and this risk may be increased during vaginal delivery after previous cesarean section, especially at high infusion rates <sup>11,12</sup>. With more potent uterine stimulants, such as prostaglandin E<sub>1</sub> (Misoprostol)<sup>13</sup> and prostaglandin E<sub>2</sub> (dinoprostone) rupture occurs in approximately 2.5 percent of women after their use.

Maternal death is a rare complication of rupture, though it is more common in ruptures occurring outside of a hospital and in women with an unscarred uterus. Overall, uterine rupture accounts for approximately 5 percent of all maternal deaths each year.

Grand multiparity with extreme weakness of uterine wall caused by repeated child birth could be a possible cause of rupture in this case. Prompt diagnosis, immediate operation, the availability of large amounts of blood and antimicrobial therapies have greatly improved the prognosis in such cases.

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