

Quiz

A single dose of misoprostol and uterine fundus rupture in early pregnancy

Can and Aktoz. Misoprostol related rupture in early pregnancy

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DOI: 10.4274/jtgga.galenos.2019.2019.0075

Received: 16 February, 2019 **Accepted:** 9 July, 2019

What is your diagnosis?

A 27-year-old, gravida 3 para 1 woman who had pelvic pain was admitted to hospital. In her obstetric history, she had delivered a 1100g female baby by cesarean section one year ago because of acute fetal distress. A single fetus consistent with 11 weeks 5 days with no cardiac activity was detected in uterus by ultrasonography. In addition, an arcuate uterus was observed. The patient was hospitalized for medical termination. The patient received a single dose of misoprostol 400 µg vaginally. Six hours later, she had severe abdominal pain. Her blood pressure was 100/60 mmHg, pulse rate was 96 beats per minute. Her abdomen was distended with guarding and rebound tenderness. Patient also had chest pain. Transvaginal ultrasonography was performed and intrauterine gestational sac was seen. Prior caesarean scar was intact and a 9-cm depth of a free fluid collection in the perisplenic and perihepatic spaces. Her hemoglobin levels decreased from 9.4 g/dL to 7.8 g/dL within two hours. Emergency laparotomy was performed.

Answer

Intraoperatively, uterus fundus rupture at 4 cm length was seen (Fig.1). Ruptured area was occupied by a clot and the gestational sac was still in the uterus and it was successfully suctioned. Approximately 1000 mL blood collection was drained during operation. The site of rupture was repaired by continuous 1-0 absorbable sutures. A single unit of packed red blood cells and one unit of fresh frozen plasma were transfused during the laparotomy. An additional unit of red blood cells was given postoperatively. Patient was stable after the surgery and was discharged from the hospital five days later.

There are guidelines for termination of pregnancy with misoprostol, however there is no certain management on route or dosage of misoprostol in patients with prior caesarean.

FIGO recommends misoprostol usage for missed abortion with a dose of 800 µg vaginally every 3 hours before 13th weeks of gestation (1). Despite of the data about safety of misoprostol, uterine rupture is one the major concerns about administration of the drug for termination of pregnancy especially for second and third trimester. The incidence of rupture varies from about 1:1000 to 1:20000 labors and most of them were associated with a prior C-section (2). Management of uterine rupture is not certain because data on the management of uterine rupture in early pregnancy are limited and differs due to patient status. In general, hysterectomy is performed by the reason of clinical condition. In literature, there were some reports about conservative surgical repair of uterine rupture. An article by O'Connor et al described pregnancies in patients in whom repair of a ruptured uterus had been performed previously. Seventeen of 18 pregnancies had a successful outcome and no case of recurrent rupture was observed (3).

There were cases of uterine rupture have been reported in early gestation even if small doses of misoprostol was given. For example, Jwarah et al and Kim et al were reported two cases in 2000 and 2005, respectively (2, 4). In both cases, uterine rupture was observed in first trimester of pregnancy following misoprostol usage in women with prior C-sections. The case reported by Kim et al was interestingly similar to our case because uterine rupture was existed in a horn and not the previous caesarean scar. In that case, it was said that the reason of uterine rupture could be misoprostol administration and local thin myometrium, not previous caesarean scar. In 2006, Hidar wrote a letter to editor about this case report and speculated about the possibility of ectopic pregnancy in tubal interstitium (5). In fact of eccentric location of gestational sac, thin myometrium that was observed retrospectively by authors and timing of pain after drug administration, this assessment seems reasonable.

To our knowledge, this case seems to be the first report of a uterine fundus rupture occurring in the first trimester of gestation in a patient who was given a single vaginal dose of misoprostol.

Disclosure of interest

The authors report no conflict of interest.

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Figure 1. Intraoperative view of uterine fundus rupture.