Spontaneous Complete Intraperitoneal Amniotic Sac Protrusion Caused by Clinically Silent Uterine Rupture Following First Trimester Abortion

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Abstract

Background: First trimester curettage is one of the most common gynecological surgical procedures. Uterine rupture during pregnancy, following this procedure may occur.

Case Presentation: A 33 years-old woman, with a history of surgical abortion by aspiration; was referred to our tertiary referral center with anhydramnios at 25 weeks of gestation. The ultrasound revealed an amniotic sac protrusion in the abdominal cavity measuring 110 mm x 100 mm associated with a silent postero-lateral uterine rupture, which was confirmed by MRI. A live 715 g male neonate was delivered by caesarean section.

Conclusion: Uterine rupture during pregnancy, following first trimester curettage may occur although this is a rare phenomenon.

Introduction

First trimester curettage is one of the most common gynecological surgical procedures with a low rate of complication (0%, 87%) [1]. We present a case of spontaneous complete intraperitoneal amniotic sac protrusion caused by a clinical silent uterine rupture, following first trimester vacuum aspiration and a probable uterine perforation.

Background: First trimester curettage is one of the most common gynecological surgical procedures. Uterine rupture during pregnancy, following this procedure may occur.

Case Presentation: A 33 years-old woman, with a history of surgical abortion by aspiration; was referred to our tertiary referral center with anhydramnios at 25 weeks of gestation. The ultrasound revealed an amniotic sac protrusion in the abdominal cavity measuring 110 mm x 100 mm associated with a silent postero-lateral uterine rupture, which was confirmed by MRI. A live 715 g male neonate was delivered by caesarean section.

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the uterus through a 40 mm uterine wall dehiscence located far from the two previous caesarean scars. The wall of the uterine defect was located at the upper part of the anterior uterine wall (Figure 2 and 3). We extended the uterine rupture by a 6 cm longitudinal corporeal anterior incision, to preserve amniotic sac, to access to the head of the foetus (Figure 4). After amniotic sac rupture, the foetus is born with a cephalic presentation. Further inspection revealed a right side fallopian tubes’ adhering to myometrium at the uterine defect. Adhesiolysis was performed. After removing the fibrotic part of the defect, the uterus was closed in 2 layers. The post-operative course was uneventful. The new-born male, weighing 715 g, had Apgar score of 8/8 (1/5 minutes). Respiratory distress occurred, which required intubation and mechanical ventilation. Respiratory condition gradually deteriorated, associated with intra ventricular hemorrhage and the infant died at 10 days after stopping intensive care.

**Discussion**

We present a case of spontaneous complete intraperitoneal amniotic sac protrusion caused by a clinical silent uterine rupture. We hypothesize that the uterine rupture in this case may have resulted from an unrecognized perforation at first-trimester curettage procedure. A similar case of silent uterine rupture, with fetal leg protruding from the uterine perforation after a first curettage, was reported [2].

Uterine rupture during labor sometimes occurs at uterine scar. International guidelines encourage obstetricians to inform patients of this risk [3-5]. However, asymptomatic spontaneous uterine rupture during pregnancy is uncommon. Obstetric or gynecologic surgical scar including myomectomy or operative hysteroscopy are usually responsible for silent uterine rupture during pregnancy: Reported a case of pre-labor asymptomatic amniotic sac and arm protrusion through caesarean scar [6]. Reported a case of silent uterine rupture, with a protrusion of the amniotic sac through a 3 cm uterine dehiscence, secondary to hysteroscopic metroplasty [7]. Asmaa Al-Kufaishi reported spontaneous amniotic sac herniation at 33-week after two laparoscopic procedure for endometriosis [8]. Described defect in the uterine wall with prolapse of amniotic sac into it at 32 weeks’ gestation in a primigravida woman without any previous uterine surgery [9].

Uterine rupture of an unscarred uterus was reported to be a rare event with its incidence1/16,849 deliveries [10] or 0.009% [11]. Although rare, primary uterine rupture is usually symptomatic and particularly morbid [12]. In a Californian retrospective study on incidence of complication after abortion in 2009-2010, the rate of major complications among all 34,755 first trimester abortion, was 0.16% (n=57). The rate of uterine perforation was 0.01% (n=2) versus 0.08% (n=7) after second semester abortion [1]. Based on the present case and literature review, we suggest that the presence of a uterine perforation should be excluded in all cases of unexplained anhydramnios.

**References**


