



## Case Report

## Spontaneous Uterine Rupture and Live Fetus in 21<sup>th</sup> Week of Pregnancy with Hemorrhagic Shock Due to Placenta Percreta: A Case Report

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**Received:** 19 August 2015

**Revised:** 28 September 2015

**Accepted:** 21 November 2015

### ARTICLE INFO

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#### Keywords:

Uterine rupture during pregnancy,  
Second trimester,  
Hydatidiform mole,  
Suction and curettage,  
Bell's palsy

### ABSTRACT

The prevalence of placenta percreta in early stage of pregnancy is very infrequent; nevertheless, it is known as a life-threatening complication. In this report, we introduce a case of massive intra-abdominal hemorrhage associated with placenta percreta and uterine rupture. A 35-year-old woman, gravid 3 para 1, with a previous Cesarean section and complete mole, underwent suction and curettage. She was admitted to emergency department for acute abdominal pain, massive intra-abdominal bleeding and hypovolemic shock. An urgent laparotomy and hysterectomy was performed after resuscitation procedures applied. Uterus-saving procedure was impossible; the middle part of uterus had a perforation in size of 5 millimeters. The patient was discharged on the 4<sup>th</sup> following day in a stable condition. The pathologic report was placenta accreta.

**Citation:** Shirazi M, Hantoush-Zadeh S, Rezaie-Keikhaie Kh, Pirjani R. **Spontaneous Uterine Rupture and Live Fetus in 21<sup>th</sup> Week of Pregnancy with Hemorrhagic Shock Due to Placenta Percreta: A Case Report.** Case Rep Clin Pract 2016; 1(1): 19-21.

### Introduction

**A**bnormal implantation of the placenta in pregnancy (placenta previa) can be divided into three categories which include percreta, increta and accrete. Placenta percreta, which is the most severe form of placentation defect, penetrates the uterine serosa into adjacent organ. In the past 50 years, the incidence of placenta increta has

increased from 1 in 30000 to 1 in 2500 due to increased rate of Cesarean section (1). Infection, uterine rupture and severe bleeding are the main causes of high morbidity and mortality due to placenta accreta (2). The risk of placenta previa is higher in women who have previous Cesarean section, uterine curettage, or multiparity of more than six pregnancies (3).

## Case Report

A 35-year-old woman was admitted during the 21<sup>th</sup> week of her third pregnancy for diffuse abdominal pain in left upper quadrant. After 3-4 hours, her pain became generalized. She had a semi-sitting position due to dyspnea.

She had given birth to a healthy child via Cesarean section 12 years before; in second pregnancy, she had a history of complete mole and underwent suction and curettage 1.5 years before.

Her medical history included Bell's palsy two months ago and surgery for nephrolithiasis 28 years ago.

Two months before the urgent admission, the patient had undergone routine ultrasonography, revealing normal results.

Upon admission, her vital signs were stable and she had hemoglobin (Hb) of 9 mg/dl, and liver and kidney function tests were normal. After 6 hours of admission, Hb was dropped to 7/9 mg/dl.

Ultrasonography was performed and massive fluid was observed in pelvic and abdominal cavity and fetus with normal fetal heart rate, enough amniotic fluid and cephalic position. Gestational age of the fetus was estimated to be 21 weeks + 5 days and multiple stones were observable in gall bladder.

After 12 hours of admission, patient had hypotension (blood pressure = 80/60 mmHg), tachycardia (pulse rate = 110), anemia (Hb = 7.9 mg/dl) and oliguria. A decision was made to perform an exploratory laparotomy due to hypovolemic shock.

Incision was midline and 1 liter blood and 500 cc clots were sucked during laparotomy. Anterior wall of uterus was ruptured in 5 millimeters diameter; invasion of placental villi appeared and had active bleeding.

We performed hysterotomy and a live normal male fetus with APGAR of 2 and weight of 550 g was born. He was dead after a few minutes. The placenta penetrated the lower uterine segment attached to the posterior wall of the bladder. Hysterectomy was done and the rupture of bladder was repaired.

The patient was noted to have diffused oozing from the pedicles and received 6 units of packed cell and 2 units of fresh frozen

plasma during the surgery; thus, an excellent homeostasis was ensured.

On the 6<sup>th</sup> postoperative day, the patient was discharged without any symptom of complication.

## Discussion

The clinical features of placenta increta and percreta such as invasion of the urinary bladder are related to the site of placental implantation, the depth of myometrium invasion and the width of abnormally adherent placental tissue (4).

A number of risk factors for defective placentation include previous uterine surgeries such as Cesarean section, myomectomy and curettage and submucosal fibroid (5).

Reported by Clark et al., as the number of previous Cesarean section increases, the risk of placenta percreta will increase (6).

Komiya et al., described a case of placenta percreta who had been taken for curettage after incomplete abortion at 21<sup>th</sup> week, which resulted in profuse vaginal bleeding and hemorrhage shock (7).

Moreover, Pont et al. mentioned a case with placenta accreta and acute abdomen due to hemoperitoneum at 13<sup>th</sup> weeks of gestation (8).

PaPadakis and Christodoulou described early placenta percreta that was unrecognized and required hysterectomy (9). Some cases of spontaneous uterine ruptures are idiopathic and they may follow adenomyosis, instrumental termination, manipulation during labor, misoprostol-induced labor or cocaine misuse (10-12).

A correlation between abnormal placentation and unexplained elevated maternal serum alpha fetoprotein has been previously reported by some authors (12). Some of the recommended imaging tools in the evaluation of placental invasion include gray scale and Doppler ultrasonography and magnetic resonance imaging (MRI) (13).

Finberg and Williams reported the diagnostic value of ultrasonography as a positive predictive value of 78% and a negative predictive value of 94% (14). Ultrasonography done for our patient, did not

detected placenta percreta. Examination of ultrasonography in the patient with history of suction curettage and Cesarean section should be done carefully. Cesarean section is a major risk factor for placenta accreta and curettage has an important role in uterine rupture (15). Shirazi et al. (author of this paper) have reported a case of uterine rupture with a history of curettage and active Bell's palsy during the labor (15). It is interesting that these two cases had history of Bell's palsy and curettage. The rupture of uterus was happened, but the fetus was alive.

### Conclusion

Our patient presented with uterine rupture due to placental percreta with a history of Cesarean section and suction curettage of complete mole. This case illustrates a serious and potentially fatal complication because of massive hemorrhagic shock; but fetus has normal fetal heart rate. A history of curettage or Cesarean, and in-detail ultrasound by expert hands, for assessment of placenta and uterus condition, are very important. It can reduce maternal mortality morbidity. Moreover, physicians should notice to history of high-risk patients in labor and emergency ward.

### Conflict of Interests

Authors have no conflict of interests.

### Acknowledgments

Our study was funded by the Tehran University of Medical Sciences. All authors have contributed significantly.

### References

1. Timor-Tritsch IE, Monteagudo A. Unforeseen consequences of the increasing rate of Cesarean deliveries: early placenta accreta and Cesarean scar pregnancy. A review. *Am J Obstet Gynecol* 2012; 207(1): 14-29.
2. Berchuck A, Sokol RJ. Previous Cesarean section, placenta increta, and uterine rupture in second-trimester abortion. *Am J Obstet Gynecol* 1983; 145(6): 766-7.
3. Miller DA, Chollet JA, Goodwin TM. Clinical risk factors for placenta previa-placenta accreta. *Am J Obstet Gynecol* 1997; 177(1): 210-4.
4. Haynes DI, Smith JH, Fothergill DJ. A case of placenta increta presenting in the first trimester. *J Obstet Gynaecol* 2000; 20(4): 434-5.
5. Wen A, Qian D, Zhang X. [Placenta accreta in early pregnancy: a case report and review of the literature]. *Zhonghua Fu Chan Ke Za Zhi* 1999; 34(10): 606-8.
6. Clark SL, Koonings PP, Phelan JP. Placenta previa/accreta and prior Cesarean section. *Obstet Gynecol* 1985; 66(1): 89-92.
7. Komiya K, Saitou K, Inoue S, Igarashi T, Hirabayashi Y, Seo N. [Massive hemorrhage associated with undiagnosed placenta percreta in a second-trimester pregnancy receiving abortion procedure]. *Masui* 2009; 58(8): 1036-8.
8. Pont M, Kouadio E, Fernandez MP, Bottaro M, Augros M, Bechet I, et al. [Placenta percreta at first trimester of pregnancy. Diagnostic and decision-making difficulties: about a case and a review of the literature]. *J Gynecol Obstet Biol Reprod (Paris)* 2010; 39(6): 498-502.
9. Papadakis JC, Christodoulou N. Placenta percreta presenting in the first trimester: review of the literature. *Clin Exp Obstet Gynecol* 2008; 35(2): 98-102.
10. Sallam AH, Preston J. Idiopathic uterine perforation in late pregnancy. *Journal of Obstetrics and Gynaecology* 2002; 22(3): 317.
11. Berghahn L, Christensen D, Droste S. Uterine rupture during second-trimester abortion associated with misoprostol. *Obstet Gynecol* 2001; 98(5 Pt 2): 976-7.
12. Mishra A, Landzberg BR, Parente JT. Uterine rupture in association with alkaloidal ("crack") cocaine abuse. *Am J Obstet Gynecol* 1995; 173(1): 243-4.
13. Sonin A. Nonoperative treatment of placenta percreta: value of MR imaging. *AJR Am J Roentgenol* 2001; 177(6): 1301-3.
14. Finberg HJ, Williams JW. Placenta accreta: prospective sonographic diagnosis in patients with placenta previa and prior Cesarean section. *J Ultrasound Med* 1992; 11(7): 333-43.
15. Shirazi M, Rahimi Shaarbaf F, Moosavi S. Rupture of an unscarred uterus in a nullipar pregnant women with a history of curettage: case report. *Tehran Univ Med J* 2015; 73(2): 138-42. [In Persian].