

Placenta percreta with painless uterine rupture at the 2nd trimester

Salah M. Baloul, MBBS, MRCOG, Afaf R. Al-Sayali, MBBCh, DGO, Amer M. Basha, MBBS, DIS, Nusrat J. Gangoo, MBBS.

ABSTRACT

A pregnant lady at 27 weeks and 2 days gestation with a known placenta previa major and a history of previous lower segment cesarean section had a sudden severe painless vaginal bleeding. At laparotomy a uterine rupture was noted, no hemoperitoneum found and placenta percreta was diagnosed. This is the first case reported in the Kingdom of Saudi Arabia, it is rare, only 3 cases of silent or asymptomatic uterine rupture secondary to placenta percreta were reported in the literature in the last 30-years. Non-invasive methods could help in the diagnosis or increase suspicion of placenta percreta, therefore, proper management could be arranged through a multi-disciplinary team.

Keywords: Placenta percreta, uterine rupture, 2nd trimester.

Saudi Med J 2002; Vol. 23 (7): 857-859

Morbidly adherent placenta (MAP) with different categories (accrete, increta and percreta) carries a major risk to patient life. It is also associated with increase morbidity due to emergency operation, usually hysterectomy, and its complications. Spontaneous rupture of uterus with previous lower segment scar before labor is not common particularly in the 2nd trimester. Over the past 100 years, less than 50 cases of uterine rupture due to placenta percreta were reported in English literature were presented with hemoperitoneum.¹ This case is unique, being the first reported in the Kingdom of Saudi Arabia and the fourth presented in literature with painless bleeding without hemoperitoneum. Nevertheless, spontaneous rupture secondary to placenta percreta may occurs in up to 15% of uterine rupture cases.² In this patient the uterine rupture occurred at 27-28 weeks gestation. She has a known placenta previa major with a history of lower segment cesarean section (LSCS).

Case Report. A 37-year-old Saudi lady was admitted to the hospital at 25 weeks and 3 days gestation with slight vaginal bleeding. She was Para 7+0. Her 6th delivery was by LSCS followed by a normal vaginal delivery. She has no other significant current or past medical history. An ultrasound (US) scan revealed a placenta previa centralis located anteriorly. She remained stable in the hospital, with slight on and off vaginal bleeding and no abdominal pain. Her investigations were normal. Four units of blood were cross matched and kept for her. At 27 weeks and 2 days gestation, at 6 a.m. she complained of sudden painless heavy vaginal bleeding. The loss was estimated to be around one litre. The abdomen was soft, not tender and fundal size corresponds to gestational age. The fetal heart was audible. The patient was taken urgently to the theater, resuscitation commenced efficiently with blood products transfusion and laparotomy was performed by a Senior Obstetrician. There was no

From the Department of Obstetrics, Taif Maternity Hospital, Taif, Kingdom of Saudi Arabia.

Received 28th October 2001. Accepted for publication in final form 3rd February 2002.

Address correspondence and reprint request to: Dr. Salah M. Baloul, Taif Maternity Hospital, PO Box 5084, Taif, Kingdom of Saudi Arabia. Tel. +966 (2) 7489545. Fax. +966 (2) 8221683. E-mail: baloul_sa@yahoo.com

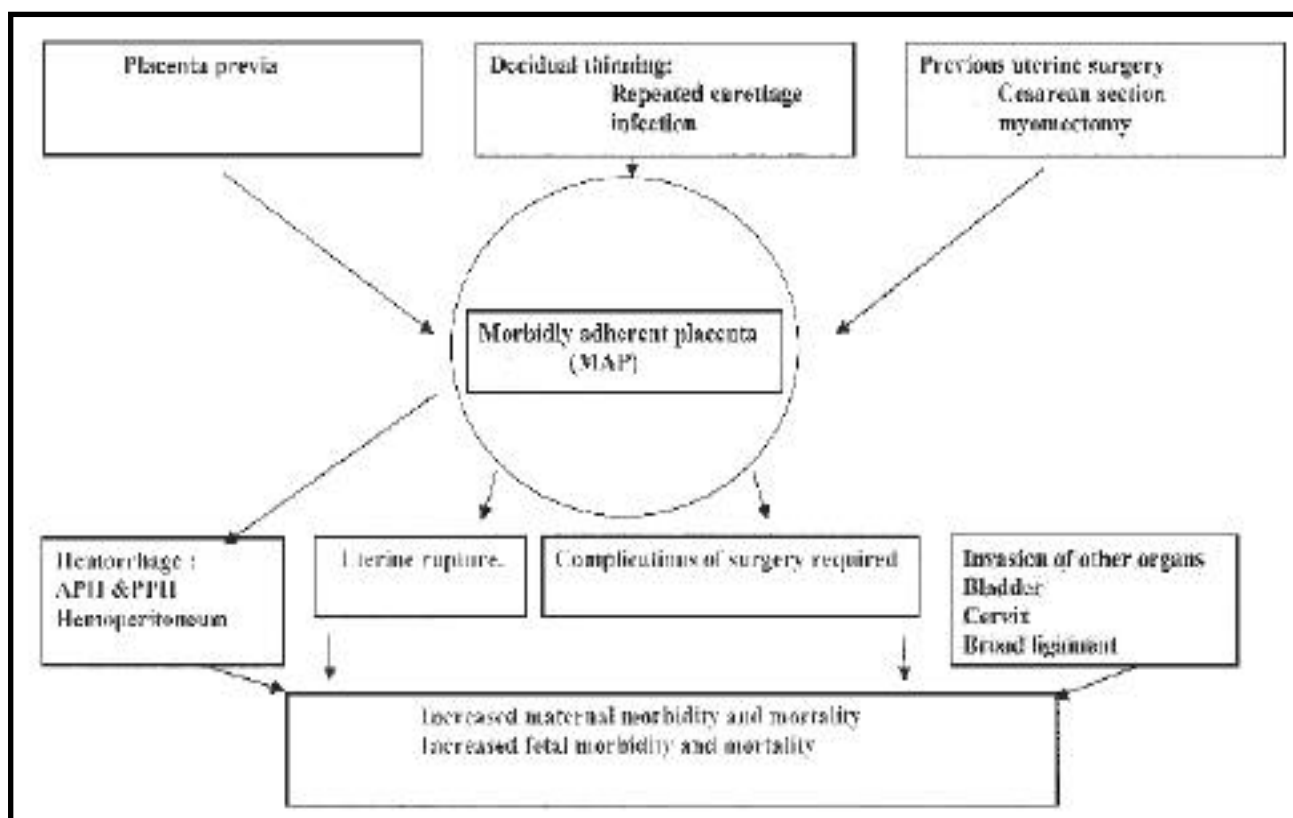


Figure 1 - Risk factors associated with MAP, complications and outcome. MAP - morbidly adherent placenta, APH - antepartum hemorrhage, PPH - post-partum hemorrhage.

hemoperitoneum, a uterine rupture of approximately 3 cm was noted at the middle of the scar and the placenta was clearly seen through it, invading the uterine wall. The urinary bladder was high. Dissection of the bladder was performed, followed by delivery of a baby boy weighing 1100 gram, with apgar score of 6 and 9 at one and 5 minutes. The placenta was very adherent and profuse bleeding started. A Consultant arrived, took over and hysterectomy was performed. The patient received 5 units of blood in theatre. Postoperatively the urine was bloody in color. On the 2nd day an intravenous pyelogram (IVP) was found normal. Urine turned clear on the 4th day. She remained in the hospital for 2 weeks with catheter in situ, which was removed a day before discharge. Her postoperative period was otherwise uneventful. The histopathology showed placenta percreta. She presented a week later with a high vesicovaginal fistula, confirmed by an IVP and managed by the Department of Urology.

DISCUSSION. Placenta previa percreta is a life threatening condition that requires a multidisciplinary management approach. Its association with placenta previa in patients with previous LSCS is well known. The risk may increase

with the increase in number of previous LSCS. Placenta percreta may also occur in patients with a history of any previous trauma or surgery to the uterus, and in some patients who have a history of infection or endometritis.³ Nevertheless it has been reported in a primigravida without any known risk factors.⁴ Complications and adverse effects of placenta percreta result from severe bleeding (**Figure 1**), its invasion extent and complication of the emergency operation which is virtually, always by hysterectomy. Urinary complications are frequently encountered considering the anatomical relation.⁵ The invasion of placenta percreta to urinary bladder^{6,7} and to the broad ligament and cervix,⁸ require different approach, thus make it more necessary to identify placenta percreta early in the antenatal period. Uterine rupture was known to occur in the 3rd trimester, more during labor and particularly with previous uterine scar. Added to the known risk factors such as multiparity, baby size and use of stimulatory drugs, we found that placenta percreta per se constitutes a major risk to uterine rupture.² Differently, this may occur before labor, in the 2nd trimester and even in primigravida.^{4,9,10} Patients present mostly in shock and with hemoperitoneum or signs of acute abdomen, though it was a silent

rupture in our patient. Antenatal diagnosis of MAP may present a dilemma, however US and color Doppler were found very helpful in detection of placenta percreta as early as 14 weeks gestation.^{11,12} However, magnetic resonance imaging (MRI) remains superior in identifying the presence and extent of MAP.^{12,13} Type B US, which is a static image in which the sound waves of high frequency pass through different structure of the body and reflected back, is also helpful in identification of defective uterine scar.¹⁴ Mid trimester elevated maternal serum alpha-fetoprotein was also found associated with placenta percreta.¹² All of these may assist in optimizing the intervention decision. Management of patients with placenta percreta is almost ultimately hysterectomy. However, administration of drugs such as methotrexate⁷ were used in certain cases prior to hysterectomy and not in the emergency situations.

In conclusion, MAP is a condition that endangers patient life with a mortality rate ranging from 6-30%.² In this case, the presentation of the uterine rupture at 2nd trimester, was not associated with hemoperitoneum and its clinical features, as was reported in similar cases. This may raise the importance of early diagnosis that might minimize the risk of catastrophic sequel, and allow for a rationalized multi-disciplinary management plan.

References

- DeRoux SJ, Prendergast NC, Adsay NV. Spontaneous uterine rupture with fatal hemoperitoneum due to placenta percreta: a case report and review of the literature. *Int J Gynecol Pathol* 1999; 18: 82-86.
- Quakernack K, Bordt J, Nienhaus H. Placenta percreta and rupture of the uterus. *Geburtshilfe Frauenheilkd* 1980; 40: 134-136.
- Imseis HM, Murtha AP, Alexander KA, Barnett BD. Spontaneous rupture of a primigravid uterus secondary to placenta percreta. *J Reprod Med* 1998; 43: 233-236.
- Bretones S, Cousin C, Gualandi M, Mellier G. A case of spontaneous rupture in a thirty week primiparous gestation. *Journal de Gynecologie* 1997; 26: 24-27.
- Mathieu E, Dufour P, Prolongeau JF, Vinatier D, Trodjeman N, Ducloy JC et al. Uterine rupture after twenty two weeks of amenorrhea due to placenta praevia percreta. *Rev Fr Gynecol Obstet* 1995; 90: 228-232.
- Coates VA, Fishman MS, McCall WG. Placenta percreta: Report of case. *CRNA* 1999; 10: 165-169.
- Hull AB, Salemo CC, Sanes CC, Pretorius DH. Three dimensional ultrasonography and diagnosis of placenta percreta with bladder involvement. *J Ultrasound Med* 1999; 18: 853-856.
- Lin C, Adamczyk CJ, Montag AG, Zelop CM, Snow JC. Placenta previa percreta involving the left broad ligament and cervix. *J Reprod Med* 1998; 43: 839-843.
- Bernal-Martinez S, Charez H, Villa F, Guzman A. Uterine rupture and placenta percreta in the second trimester. *Ginecol Obstet Mex* 1996; 64: 482-483.
- Kinoshita T, Ogawa K, Yasumizu T, Kato J. Spontaneous rupture of uterus due to placenta percreta at 25 weeks gestation: a case report. *J Obstet Gynecol Res* 1996; 22: 125-128.
- Passini Junior R, Knobel R, Barini R, Marussi E. Placenta percreta with a silent rupture of the uterus. *Rev Paul Med* 1996; 114: 1270-1273.
- Chung CL, Cheng PJ, Liang CC, Chang FH, Soong YK. Obstetrical hysterectomy and placenta percreta/percreta: three bladder injury case reports. *Chang Keng I Hsueh* 1997; 20: 44-51.
- Maldjian C, Adam R, Pcloisi M 3rd, Rudelli RD, Maldjian J. MRI appearance of placenta percreta and placenta accrete. *Magn Reson Imaging* 1999; 17: 965-971.
- Yang TZ, Li WZ. Detection of uterine scar defect during pregnancy by ultrasonics. *Chung-Hua Fu Chan Ko Tsa Chih* 1994; 29: 458-460, 508-509.