Case Study/กรณีศึกษา

Case Series Management in Placenta Accreta

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Abstract

We reported case series of placenta accreta management from 2003 to June 2013. All cases had pathologically proven diagnosis and delivered in Ramathibodi hospital. There were 13 cases of placenta accreta during study period. All cases had previous cesarean section. The prenatal diagnosis of placenta accreta were 6 cases (46.15%) while intraoperative were 7 cases (53.85%). Postpartum hemorrhage in prenatal and intraoperative diagnosis groups were 1,200-6,000 ml and 4,000-20,000 ml respectively. Every cases ended up with hysterectomy. Almost prenatal diagnosis group had elective surgery. The last 2 cases in prenatal diagnosis group have done by multidisciplinary team and uterine arteries embolization (UAE) with a good outcome. Prenatal diagnosis of placenta accreta is essential for the management. Pre-operative planning approach by the multidisciplinary team is very helpful. UAE is the good option for management especially in prenatal diagnosis group.

Keywords; placenta accreta, postpartum hemorrhage, uterine arteries embolization

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Introduction

Placenta accreta is an abnormally placental attachment to uterine wall. There were 3 types depending on the severity of placental invasion into myometrium which can be proved by histological examination; accreta (superficial invasion of myometrium), increta (invade myometrium), percreta (invade through the myometrium involving the serosa). However, clinically all types of these conditions are described as placenta accreta[1]. Placenta accreta is considered a potentially life threatening obstetric condition that needs a multidisciplinary team approach for management [1-3]. The incidence of placenta accreta has increased pararell progressively, with the cesarean delivery rate. The diagnosis of placenta accreta prenatally by ultrasonography is effective. MRI may be used to confirm in complicated case. There are many kinds of approach for management in placenta accreta, however, no any approaches are the best. These depend on the patient condition, care provider team, and so on[2,3]. In this case series, we reported the diversity of placenta accreta management.

Case series report

We reported a case series of women who had a pathologically proven diagnosis of placenta accreta from January 2003-June 2013. All cases were delivered at our tertiary hospital.

There were 45,945 pregnant women delivered during study period, placenta previa 69 cases (0.15%) placenta accreta 13 cases (0.028%), cesarean section 18,273 cases (39.77%). The cesarean section and placenta accreta rate in 2003-2009 were 37.4%, and 0.014% respectively while in 2010-June 2013, were 46.93% and 0.07% respectively. All patient information and management were present in Table I. Elderly pregnancy were 9 cases (66.67%). The number of one previous cesarean section (c/s), 2 previous c/s, 3 previous c/s were 9 cases (69.23%), 2 cases (23.08%) and 1 case (7.69%) respectively. All cases had placenta previa totalis. The diagnosis of placenta accreta were prenatally 6 cases (46.62%) while the others were intraoperation (53.85%). The prenatal diagnosis was done by transabdominal (TAS) and transvaginal (TVS) ultrasound as present in Figure 1, 2. Only two difficult cases (4^{th}, 13^{th}) were confirmed by Magnetic Resonance Imaging (MRI). The pathologist confirmed diagnosis with placenta increta 9 cases and percreta 4 cases. Antepartum hemorrhage were presented in 7 cases (58.33%) which mostly occurred in 3^{rd} trimester. Postpartum hemorrhage in prenatal and intraoperative diagnosis group were 1,200-6,000 ml and 4,000-20,000 ml respectively. The surgical procedure in prenatal diagnosis group, almost were elective surgery with classically uterine incision above placental edge and leave placenta in situ, except one case (10^{th}).

For the intraoperative diagnostic group, 4 cases were emergency cesarean delivery while 3 cases were elective surgery. All cases had done with lower uterine incision with passing through anterior placenta and manual removal of placenta after baby birth. There were 2 cases (9^{th},12^{th}) managed with internal iliac occlusion, the first had done after severe hemorrhage (20,000 ml).While the other was planned to do temporary occlusion before operation with uterine artery embolization (UAE) and had blood loss 2,500 ml. This series found 5 cases of bladder injury during operation (4^{th}, 5^{th}, 8^{th}, 9^{th}, 13^{th}) but only one case (9^{th}) had vesico-vaginal fistula after operation.

Emergency c/s was done in 6 cases (1^{st}, 2^{nd},5^{th}, 7^{th}, 9^{th}, 10^{th}) which estimated blood loss was 8,000-

Table 1 Summary of management and outcome

No	Age	G/P	P c/s	GA (wk)	P.pvt	Dx.Accreta		OP	C/S		PPH	ICU	Bl Tx (unit)		
	(yrs)				(Dx.GA)	Preop	Intraop		Em	El	(ml)	(day)	PRC	FFP	Plt
1	27	4/3	2	37	30		yes	c/s with Hys	yes		8000	1	12	4	10
2	39	2/1	1	24	24		yes	c/s with Hys	yes		12700	1	8	4	
3	35	2/1	1	37	no		yes	c/s with Hys		yes	4000	1	6	3	
4	30	2/1	1	37	20	yes		1st c/s with pl.left insitu		yes	1700		4		
								2nd TAH with repair bladder			5000	1	10		
								(11wk after 1st operation)							
5	38	2/1	1	35	20		yes	c/s with TAH with repair bladder	yes		20000	6	8	10	12
6	31	2/1	1	38	30		yes	c/s with Hys		yes	10500	1	9	4	4
7	39	2/1	1	37	20		yes	c/s with Hys with SB tube	yes		15000	1	12	16	12
8	32	2/1	1	38	35	yes		c/s with Hys with repair bladder		yes	6000	2	6		
9	39	2/1	1	29	20		yes	c/s with Hys with Int. iliac ligation	yes		20000	2	20	20	8
								with repair bladder							
10	38	3/2	2	30	28	yes		1st c/s with TAH	yes		10500	1	12	4	8
								2nd re-explor to stop bleed (3-4 hr							
								after 1st operation)							
11	37	2/1	1	37	22	yes		c/s with Hys		yes	2500	1	3	1	
12	37	3/2	2	36	20	yes		c/s with Hys with UAE		yes	2500	1	2	4	
								and temporally Int. iliac ligation							
13	35	3/2	2	37	26	yes		c/s with Hys with UAE		yes	1200	1	2	0	0
								with repair bladder							

G/P = Gravida/ Parity, P.pvt= placenta previa totalis, Dx=Diagnosis, GA= gestational age,
Preop= Preoperative, Intraop= Intra operative, OP= operation, P c/s= previous cesarean section, Em=emergency, El=elective, Hys= Hysterectomy, Pl= placenta, SB= Sengstaken Blakemore tube, UAE= uterine artery embolization, PRC=pack red cell, FFP=fresh frozen plasma, Plt=platelet

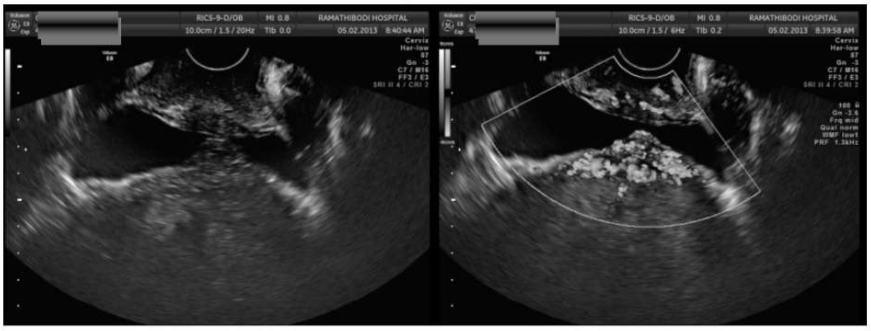
20,000 ml. Almost were non-prenatal diagnosed of placenta accreta. Only one case (10th) had prenatal diagnosed of placenta accreta. She developed heavy bleeding so the emergency c/s by a classical uterine incision above the placental edge was performed then bilateral uterine artery occlusion and placental was removed. The massive bleeding occurred abruptly in the lower part of uterus that had dense adhesion to posterior bladder wall. This case had to re-explore within 7 hours due to massive bleeding (10,500 ml) from vaginal stump and posterior bladder wall.

Discussion

The incidence of placenta accreta has been rising in our hospital from 0.014 % to 0.070 % in 2002 to 2009 and 2010-June 2013 respectively. The coin-

A B

Figure 1 *Sagittal view TAS showed placenta previa totalis with accreta and invaded bladder wall (A= 2D, B= Power Doppler).*



A B

Figure 2 *Coronal view TVS showed placenta accreta invaded posterior bladder wall (A= 2D, B= Color Doppler).*

cidence factor is the increasing incidence of c/s rate from 37.4% in 2000-2009 to 46.93% in 2010-June 2013.

Placenta accreta is the life threatening obstetric condition and increases the chance of morbidity and mortality for both mother and newborn especially if cannot be diagnosed preoperatively. Antenatal diagnosis of placenta accreta could be done by ultrasonography; 2 D, 3 D and Doppler flow study (Figure 1, 2). MRI is performed in the difficult case. The risk factors in this study were elderly pregnancy (66.67%), previous c/s (100%) and placenta previa (100%) like other reported[1].

Antenatal diagnosis is very important because it improves both maternal and neonatal outcomes by planed elective cesarean delivery before the onset of labour and multidisciplinary team approach (obstetricians, anesthesiologist, intervention radiologist, urologist, vascular surgeon). There are 2 options of the approach; conservative or hysterectomy which depend on patient condition, patient fertility desire, care provider and team experience.

Generally, this condition is managed by peripartum hysterectomy with massive blood loss and life threatening because most of these are intraoperative diagnosis. In conservative operation could be done by early elective c/s with placenta left in situ that could be effective but serious complications, such as sepsis, DIC, massive blood loss[4,5]. Medical management with methotrexate after c/s with placenta left in situ will have many complications including hemorrhage, sepsis and consumptive coagulopathy[5].

Internal iliac artery ligation has traditionally been advocated as an effective method to control intraoperative hemorrhage which could decrease pelvic blood flow by 49 %[6]. The failure of this technique to reduce blood loss is technical difficulties, requiring experts and excess time to block blood flow. Moreover, blood flow in external iliac artery branches from perivesical area and in the vagina are increased in placenta increta and percreta so ligation of internal iliac artery might fail to reduce hemorrhage from vaginal stump or the ablated bladder surface.

UAE is considered as a safe and effective method for controlling postpartum hemorrhage[7]. In this report, UAE was performed in the last 2 cases. The procedures were clinically effective in both cases as other reported[8,9]. In the 12th case in this present study was managed by both UAE and temporary internal iliac occlusion before hysterectomy with blood loss 2,500 ml, while in the 13th case, was only UAE with blood loss 1,200 ml. These 2 cases presented lower blood loss than those previous management in our hospital and no any adverse outcome after follow up 3 months. Even through the low number of cases in this study because of rare case but the outcome of UAE in this condition is really impressive in c/s hysterectomy case. Further study is required for more cases and especially in conservative treatment of placenta accreta for preserving fertility and allowing normal pregnancies.

In summary of this report, we have reported successfully in management of placenta accreta with the following steps;

1. Prenatal diagnosis of placenta accreta, so we have to screen all high risk cases particularly in case with placenta previa by ultrasound.
2. Management by multidisciplinary approach
3. Early elective c/s at 36 weeks gestation.
4. c/s was done by vertical uterine incision above placental edge at least 2 cm.
5. Don't touch placenta.
6. UAE was done after c/s.
7. Delayed ligation technique hysterectomy.
8. Temporary internal iliac occlusion was performed when UAE unsuccessful.

Acknowledgements

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Disclosure

No conflict of interest.

What is already known on this topic?

Placenta accreta is well established as a potentially life threatening obstetric condition that needs a multidisciplinary team approach for management. The incidence of placenta accreta has increased pararell progressively, with the cesarean delivery rate. The diagnosis of placenta accreta prenatally by ultrasonography is effective. MRI may be used to confirm in complicated case. There are many kinds of approach for management in placenta accreta. There are 2 options of the approach; conservative or hysterectomy which depend on patient condition, patient fertility desire, care provider and team experience. However, no any approaches are the best and most of them were undiagnosed prenatally which managed by peripartum hysterectomy with massive blood loss and life threatening.

What this study adds?

The recommendation for management of placenta accreta were emphasized on the following steps; prenatal diagnosis of placenta accreta by ultrasound, multidisciplinary team approach, early elective c/s by vertical uterine incision, don't touch placenta, UAE was done after c/s, delayed ligation technique hysterectomy and temporary internal iliac occlusion was performed if UAE unsuccessfully.

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Case Study/กรณีศึกษา

รายงานการดูแลภาวะรกเกาะฝังแน่น

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หน่วยเวชศาสตร์มารดาและทารกปริกำเนิด ภาควิชาสูติศาสตร์-นรีเวชวิทยา
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บทคัดย่อ

บทความนี้รายงานวิธีการดูแลต่างๆ ของภาวะรกเกาะฝังแน่น ตั้งแต่ปี 2546 ถึง มิถุนายน 2556 ซึ่งทุกราย ได้รับการยืนยันวินิจฉัยทางพยาธิวิทยาและคลอดในโรงพยาบาลรามาธิบดี พบว่ามีทั้งหมด 13 ราย และทุกรายเคยได้รับการผ่าคลอดและมีภาวะรกเกาะต่ำ พบว่ามีการวินิจฉัยภาวะรกยังแน่นได้ก่อนคลอด 6 ราย (ร้อยละ 46.15) วินิจฉัยระหว่างผ่าตัด 7 ราย ((ร้อยละ 53.85) ภาวะตกเลือดหลังคลอดในกลุ่มที่วินิจฉัยก่อนและหลังผ่าตัด คือ 1,200-6,000 มิลลิลิตร และ 4,000-20,000 มิลลิลิตร ตามลำดับ

ผู้ป่วยทุกรายได้รับการตัดมดลูก ส่วนใหญ่ของกลุ่มที่วินิจฉัยก่อนคลอดได้รับการผ่าตัดโดยมีการวางแผนผ่าตัดล่วงหน้า ไม่ใช่การผ่าตัดฉุกเฉิน โดยที่ 2 รายสุดท้ายในกลุ่มนี้ได้รับการดูแลจากกลุ่มแพทย์สหสาขาด้วยการฉีดสารอุดกั้นเส้นเลือดแดงที่มาเลี้ยงมดลูกและได้รับผลการรักษาที่ดี

การวินิจฉัยภาวะรกเกาะฝังแน่นก่อนคลอด ถือเป็นสิ่งจำเป็นในการดูและรักษา การวางแผนการรักษาก่อนผ่าตัดโดยกลุ่มแพทย์สหสาขา มีประโยชน์มาก การฉีดสารอุดกั้นเส้นเลือดแดงที่มาเลี้ยงมดลูกเป็นทางเลือกที่ดีในการดูแลผู้ป่วยโดยเฉพาะกลุ่มวินิจฉัยภาวะรกเกาะฝังแน่นก่อนคลอด

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