

Case Reports

Two cases of placenta accreta with conservative management

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Summary

Placenta accreta is an important obstetric complication which can lead to life-threatening postpartum hemorrhage. The mortality rate has been reported to be high in developing countries. The authors report two cases of patients who were successfully treated with conservative management. Case 1: A 36-year-old woman was diagnosed as having placenta accreta following vaginal delivery. The patient was hemodynamically stable and was given conservative management. On the 74th day postpartum, the retained placenta was naturally delivered without significant hemorrhage. Case 2: A 38-year-old woman was referred to the authors' tertiary clinic for advanced management of an entirely retained placenta. The patient was hemodynamically stable and opted to preserve the uterus. Conservative management was selected as the course of action. On the 95th day postpartum, the retained placenta with necrosis was naturally delivered without complication. Neither case used methotrexate (MTX) or blood product.

Key words: Placenta accreta; Conservative management; Postpartum hemorrhage; Half-life of serum hCG.

Introduction

Placenta accreta is an important obstetric complication that can cause life-threatening massive bleeding. It is associated with maternal morbidity and has a mortality rate as high as 7% [1, 2]. It is reported that a history of intrauterine operation and cesarean section are risk factors for placenta accreta and, with the rise in cesarean birth rate, the incidence of placenta accreta has increased ten-fold in the past 50 years [3].

Placenta previa suggests the possibility of placental adhesion, which is thought to be caused by the placenta being adhered to a defective site of the decidua [4]. In such cases, careful diagnosis and multidisciplinary management strategies are required prior to cesarian section to reduce the risk of morbidity [5].

Unfortunately, if the placenta previa does not exist, sometimes the placenta accreta is diagnosed for the first time with a failure to manually removal the placenta after vaginal delivery. When the adhesion area is limited, manual removal may be possible; however, when the whole placenta is adhered, manual removal can cause life-threatening postpartum hemorrhage [6] and increased their morbidity [7].

Uterine artery embolization (UAE) is a life-saving procedure for intractable postpartum hemorrhage in patients who seek preservation of fertility [8], and it may hasten the resorption, sloughing or expulsion of the placenta [9]. This procedure, however, requires a radiological facility and an experienced radiologist readily available.

Unfortunately, such facilities for UAE to be performed are limited.

Cesarean hysterectomy is a fundamental treatment for antenatally diagnosed placenta accreta [10]. However, as sterility is an outcome of this procedure, it is unsuitable for women who want to bear more children. Thus, conservative management was selected if the patient hopes to preserve the uterus. An effective therapy for placenta accreta in patients who hope to preserve the uterus has not been established [11].

Here, the authors report two cases of placenta accreta diagnosed following vaginal delivery that were successfully managed conservatively.

Cases Report

Case 1

A 36-year-old, gravida 4, para 3, Japanese woman with no significant past medical history received prenatal care without major pregnancy complication at the present hospital. At 39 weeks, she had an uncomplicated vaginal delivery of a healthy infant weighing 3,868 grams. There was no sign of placental resorption at 14 hours after delivery, and an attempt was made to remove the placenta under intravenous anesthesia; however, manual removal of the placenta was unsuccessful due to the whole placenta being adhered to the uterine wall of the fundal myometrium.

At 18 hours post-delivery, MRI detected a large (ten cm) placenta attached to the myometrium of the uterine fundus, which was extremely thin (Figure 1). No change was observed at 24 hours post-delivery, and a diagnosis of placenta accreta was clinically made.

Hemoglobin concentrations were 11.0 g/dl at four hours post-



Figure 1. — MRI of the pelvis on the second day postpartum showed a large amount of retained placenta. The fundal myometrium was extremely thin (Case 1).

delivery. The patient was hemodynamically stable with no significant hemorrhage or sign of infection. The patient therefore opted for conservative management in order to maintain fertility. After prophylactic antibiotic and uterotonic administration with oxytocin for two days with close monitoring of the vital signs, she was discharged from the hospital on the 14th day postpartum with no medication. No blood transfusion was required. Follow-up management was conducted once a week at the outpatient department to check for bleeding, infection, serum levels of human chorionic gonadotropin (hCG), and the size of retained placenta.

On the 34th day postpartum, an enhanced MRI showed no significant change in size of the placenta on the uterine fundus in comparison to that 18 hours after infant delivery. Neither enhanced MRI or transvaginal ultrasound (US) imaging could clarify the presence of blood flow between the uterus and retained placenta (Figure 2).

On the 74th day postpartum, the patient was admitted to hospital with lower abdominal pain and a fever of up to 38.8°C. Immediately after admission, the retained placenta was delivered naturally with total genital bleeding of about 200 ml. After placental delivery, the patient had no fever and the bleeding stopped. The pathological findings showed necrotic placental tissue. The half-life of serum hCG was 5.9 days.

Case 2

A 38-year-old, gravida 0, para 0, Japanese woman with no significant medical history gave a spontaneous vaginal delivery to an infant weighing 3,600 g at another hospital at 39 weeks. At 2 hours post-delivery, the placenta could not be manually removed. An MRI taken 2 hours post-delivery showed the entire placenta retained on the extremely thin fundal myometrium. The patient was transferred to a tertiary clinic with suspected placenta accreta

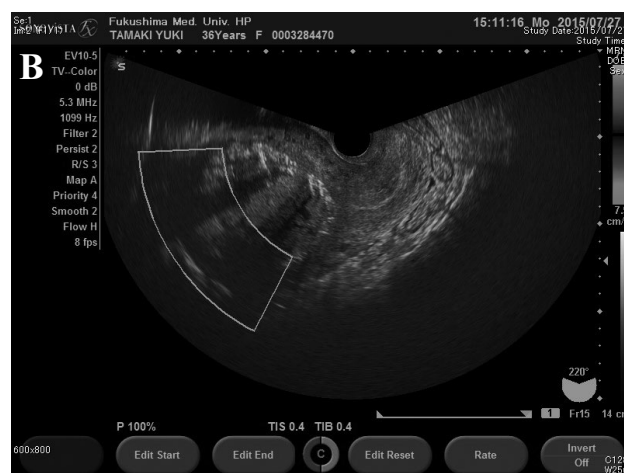


Figure 2. — A) An enhanced MRI on the 34th postpartum showing retained placenta without significant size change compared with Figure 1 (Case 1). B) Transvaginal US on the 34th postpartum. The blood flow between the myometrium and placenta is unclear (Case 1).

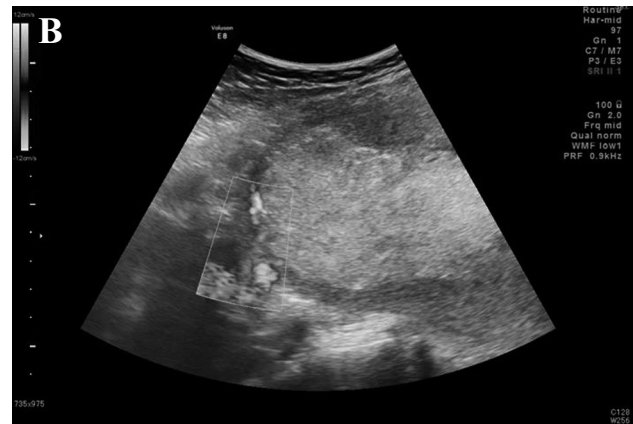


Figure 3. — A) MRI on the 30th day postpartum showing an extremely thin fundal myometrium (Case 2). B) Transabdominal US showing the presence of blood flow between the myometrium and the retained placenta (Case 2).

but hoped to preserve the uterus. On arrival, her hemoglobin concentrations were 10.1 g/dl without significant bleeding. The US showed an enlarged uterus with fundal placental tissue (9.6×8.1 cm). Myometrium invasion was not clear. She had no sign of infection and took prophylactic antibiotics for three days as well as oxytocin for one day with close monitoring of her vital signs. The patient was discharged on the 11th day postpartum with no need of medication but a weekly check-up was required.

On the 30th day postpartum, the US detected slight blood flow between the myometrium and placenta, and MRI showed an extremely thin fundal myometrium entirely attached to the placental tissue (Figure 3).

On the 95th day postpartum, the patient complained of increasing vaginal discharge without fever or abdominal pain. On the following day, the placenta was delivered spontaneously with a small amount of vaginal bleeding. Necrotic placental tissue was detected pathologically. The half-life of the serum hCG was 8.6 days.

Discussion

Placenta accreta is a well-known complication that is associated with high morbidity and mortality in pregnant women [1]. In developing countries, the mortality rate has been reported to be as high as 6–7% [2]. Recently, the incidence of placenta accreta has been increasing with the rise in cesarean birth rate [3, 12].

Traditionally, cesarean hysterectomy was considered effective for placenta accreta, which was diagnosed antenatally. However, an emergency hysterectomy is highly associated with maternal morbidity and mortality. In a systematic review, it has been reported that the morbidity and mortality rates of emergency postnatal hysterectomy are 56% and 3%, respectively [13]. Emergency hysterec-

tomy is sometimes performed when there is massive postpartum hemorrhaging following an unsuccessful attempt at manual removal of the placenta.

As mentioned earlier, another issue associated with this procedure is the loss of fertility. Some reports stated that methotrexate (MTX), as an adjuvant therapy, improved the success rate of conservative management, and hastened the postpartum involution of the placenta [14, 15]. MTX is a dihydrofolate reductase inhibitor that targets rapidly dividing cells, and is therefore a therapeutic modality for ectopic pregnancy and gestational trophoblastic disease [16]. The therapeutic use of MTX for placenta accreta may not be biologically plausible because of low cell division activity in placenta accreta. The authors therefore decided not to administer MTX in either case.

Sentilhes *et al.* reported the maternal outcomes of 167 placenta accreta cases after conservative management, which included both cesarean and vaginal delivery [17]. Of 131 cases that were successfully treated with conservative management, 116 (75%) women were observed to have spontaneous placental resorption at a median of 13.5 weeks. Of these 116 cases, the ratio of placenta accreta diagnosed after vaginal delivery such as in the present report is unknown.

Postpartum hemorrhage and fever are common complications during conservative management. In Sentilhes *et al.*'s reports [17], postpartum hemorrhage during conservative management was the greatest cause of delayed hysterectomy. None of the present authors' cases had significant postpartum hemorrhage or required blood transfusion. Fever is often thought to be secondary to endometritis or florid sepsis, but some cases may be

affected by the response to tissue necrosis without an infectious source [18]. Prophylactic antibiotics may reduce postpartum infection with placenta accreta [2].

In the present cases, the half-life of hCG in Case 1 and 2 was 5.9 and 8.6 days, respectively, which was longer than that in the normal puerperium [19]. The level of serum total hCG might be useful as a marker for the follow-up of patients with retained placenta [20].

Although extensive research has recently been carried out on adherent placenta, there is little data on individualized cases, such as unsuspected accreta diagnosed after vaginal delivery. Further accumulation of cases is necessary in future. For patients who are hemodynamically stable and hoping to preserve fertility, conservative management without MTX could be the first choice as a treatment for unsuspected accreta.

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