

Eray Caliskan · Birol Vural · Erkan Turkoz
Orkun Tan

Conservative surgical management of placenta percreta: two cases with an emphasis on tubal patency

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Abstract A 32-year-old woman, gravida 2 para 1, was hospitalized in the 31st week of gestation with a diagnosis of preterm labor. Ritodrine tocolysis failed to control uterine contractions, and an emergency cesarean section was performed for a decelerative fetal heart rate tracing. After the infant was delivered, ligation of the bilateral uterine arteries and their anastomoses with the ovarian arteries was performed. A 4×6-cm ellipsoid area of the anterior uterine corpus with placenta percreta was excised. Unilateral tubal occlusion was noted on hysterosalpingography 3 months after surgery, but the patient refused further interventions. The second case we present is that of a 28-year-old woman, gravida 3 para 2, who had her third cesarean delivery at the 38th week of gestation because of bleeding from placenta previa. We performed a repeat laparotomy for decreasing hemoglobin levels and drained 1,600 ml of blood from the abdomen. The bilateral uterine arteries and their anastomoses with ovarian arteries were ligated. Retained placental fragments were removed, and the bleeding areas were sutured. Despite resuturing of the vertical incision, uterine bleeding and hypotonia were observed, and transuterine sutures were inserted. Unilateral left tubal occlusion was observed on hysterosalpingography 3 months after surgery, and hysteroscopic balloon tuboplasty and laparoscopic tubal adhesiolysis were performed.

Keywords Placenta percreta · Conservative surgery · Tubal patency · Fertility

Introduction

Abnormal placental implantations such as accreta, increta, and percreta can cause life-threatening obstetric hemorrhage, usually resulting in hysterectomy [1]. Women with placenta percreta may choose to preserve their fertility and menstrual function at any cost. Several measures have been defined to conserve the uterus and prevent maternal morbidity. A median abdominal incision can be performed for adequate pelvic exposure. Classical or transfundal vertical uterine incisions may help to leave the placenta in situ, and postoperative methotrexate application or uterine artery embolization can be performed [2–4]. If these measures are not applicable, ligation of uterine and hypogastric arteries, intrapartum or postpartum resection of the uterine walls, and uterine packing can be done [1, 5, 6].

We report two cases of conservative management of placenta percreta and emphasize the importance of controlling tubal patency in the postoperative period.

Case report

Case 1

A 32-year-old woman, gravida 2 para 1, was admitted with lower abdominal pain at 31 weeks' gestation. Her first pregnancy had resulted in an uneventful vaginal delivery. Upon pelvic examination, no cervical changes were detected. Ultrasound examination revealed a live fetus with normal growth parameters and anterior localization of the placenta. On external fetal monitoring the fetal heart rate tracing was reactive, but regular uterine contractions of 60–70 mmHg were noted every 4–5 min. The woman was hospitalized with a diagnosis of preterm labor. Tocolytic treatment using ritodrine was begun, and steroids were given to enhance fetal lung maturation. No signs or symptoms of maternal infection were observed. At the 8th hour of admission, variable

E. Caliskan (✉) · B. Vural · E. Turkoz · O. Tan
School of Medicine, Kocaeli University,
Madenler Yapı Koop. A2 blok D: 9,
Menekse sok. Yenikent-Derince, 41000 Kocaeli, Turkey
E-mail: eray68@hotmail.com
Tel.: +90-262-2331242
Fax: +90-262-2335488

fetal decelerations were noticed, so an emergency cesarean delivery was done.

After a Pfannenstiel skin incision, we noticed about 200 ml of fresh blood in the abdominal cavity. The blood was oozing from a 4×6-cm ellipsoid area of placenta percreta on the anterior uterine wall (Fig. 1). A 1,900-g live infant was delivered through a low transverse uterine incision. We were able to remove the entire placenta except the area of percreta. Because of continuous bleeding, we ligated the bilateral uterine arteries and their anastomoses with ovarian arteries. Then we totally excised the anterior uterine wall invaded with placenta and repaired it via separate 2-0 catgut sutures (Fig. 1).

Postoperative follow-up was uneventful. Histopathologic diagnosis confirmed placenta percreta. The serum hCG level was undetectable at the 3rd postoperative week. The patient resumed menstruation 2 months after delivery. Because she was planning another pregnancy, a hysterosalpingography was obtained 3 months after surgery. Unilateral right proximal tubal occlusion was noted, but the patient refused hysteroscopy or tuboplasty. Her menstrual flow was regular 6 months after delivery, and she was advised not to get pregnant for a year.

Case 2

A 28-year-old woman, gravida 3 para 2, who had had her third cesarean delivery at 38 weeks' gestation because of bleeding from placenta previa was referred from another center to our hospital at the 4th postoperative hour. Her first cesarean delivery had been done for incomplete breech presentation 4 years previously, and the child had been diagnosed with mental and motor retardation at 2 years of age. Her second cesarean delivery was a repeat cesarean, but the child had severe

microcephaly and died at the age of 1. Her present pregnancy had also resulted in a microcephalic infant. Her hemoglobin level at admission was 6.5 g/l, pulse was 110 beats/min, and blood pressure was 80/40 mmHg. She wanted us to conserve her uterus at any cost.

Repeat laparotomy was performed for abdominal hemorrhage, and 1,600 ml of fresh and clotted blood was drained from the abdomen. The uterus was atonic, and bleeding was observed through suture sites. We ligated the bilateral uterine arteries and their anastomoses with the ovarian arteries. Sutures of the vertical uterine incision were cut, and bilateral tears were observed on the distal end of the incision (Fig. 2). Retained placental fragments were removed as much as possible from the cervix, and bleeding areas were sutured. A very thin and bleeding cervical tissue remained. We folded and sutured this cervical tissue onto itself circularly (Fig. 2). We repaired the incision and the tears with 1-0 polyglactin sutures. Hypotonia and low output bleeding persisted, so we put in four tight transuterine sutures of 1-0 catgut. The patient received six units of fresh whole blood, 20 units of oxytocin in 1,000 ml of saline, 0.2 mg of methylergonovine, and 1 g ampicillin plus 500 mg of sulbactam during the operation.

On the 1st postoperative day, 400 ml of blood was drained, which dropped to 200 ml and 50 ml on the 2nd and 3rd postoperative days, respectively. Scanty vaginal bleeding occurred during the postoperative period. Ampicillin 1 g plus 500 mg sulbactam three times daily was continued for 10 days. Histopathology confirmed placenta percreta. The first menstrual flow was observed at the 3rd postpartum month, after which a hysterosalpingography was obtained. A unilateral left proximal tubal occlusion was noted, and the patient was scheduled for tuboplasty at the 6th postpartum month. After the synechia in the cornual region was lysed with a resectoscope, a successful hysteroscopic

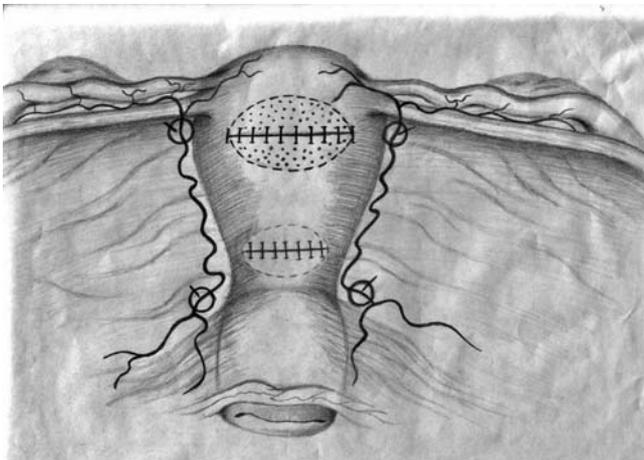


Fig. 1 Excision and repair of a 4×6-cm ellipsoid area of placenta percreta on the anterior uterine wall and ligation of bilateral uterine arteries and their anastomoses with ovarian arteries

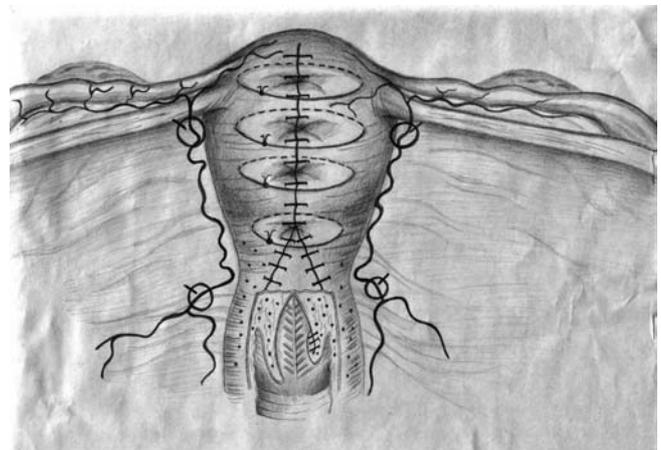


Fig. 2 Ligation of bilateral uterine arteries and their anastomoses with ovarian arteries, cervical folding and suturing, and transuterine sutures in a case of placenta previa percreta

balloon tuboplasty was performed. On laparoscopic observation, filmy adhesions involving the tubal isthmus and the ovaries were lysed, and chromopertubation was performed with 30 ml of diluted methylene blue. Uninterrupted methylene blue flow was observed through both fimbrial ends.

Discussion

Conservative management of placenta percreta is a viable option in women who desire to preserve their fertility. Leaving the placenta in utero and applying methotrexate or bilateral embolization of the uterine arteries can be done [4]. However, these options require early diagnosis of placenta percreta, preoperative planning, and availability of an experienced radiologist for embolization.

Undiagnosed placenta percreta or unsuccessful surgery, as in our cases, and uterine rupture or failed methotrexate treatment could mandate surgery [6, 7]. Ligation of the uterine arteries and their anastomoses with ovarian arteries or hypogastric arteries after delivery of the infant will decrease intraoperative and postoperative blood loss [1, 7]. Localized excision of the uterine walls infiltrated with the placenta were described in one of our cases and in two other published cases [5, 6]. In the second case we describe cervical folding to stop bleeding after removing a placenta previa percreta. We also performed horizontal transuterine sutures to help control uterine atonia after extensive surgery. Only Gupta et al. [7] have described using B-Lynch sutures in a placenta percreta case until now.

Although previous reports also aimed to preserve fertility of the patients, none of them resulted in tubal

patency. We found unilateral tubal occlusion in both of our cases. Although our patients lacked hysterosalpingography prior to pregnancy, extensive uterine surgery is a well-recognized risk for adhesion formation and tubal occlusion. A single patent uterine tube may suffice for successful pregnancy in most of the women, and patients may refuse further surgery, as in our first case. On the other hand, some women would like to take advantage of endoscopic reconstructive surgery, as in our second case. Further studies addressing these fertility problems are suggested.

References

1. Caliskan E, Tan O, Kurtaran V, Dilbaz B, Haberal A (2003) Placenta previa percreta with urinary bladder and ureter invasion. *Arch Gynecol Obstet* 268:343–344
2. Ogawa M, Sato A, Yasuda K, Shimizu D, Hosoya N, Tanaka T (2004) Cesarean section by transfundal approach for placenta previa percreta attached to anterior uterine wall in a woman with a previous repeat cesarean section: case report. *Acta Obstet Gynecol Scand* 83:115–116
3. Nijman RGW, Mantigh A, Aarnoudse JG (2002) Persistent retained placenta percreta: methotrexate treatment and Doppler flow characteristics. *BJOG* 109:587–588
4. Bennett MJ, Sen RC (2003) Conservative management of placenta previa percreta: report of two cases and discussion of current management options. *Aust NZJ Obstet Gynecol* 43:249–251
5. Morken NH, Henriksen H (2001) Placenta percreta—two cases and review of the literature. *Eur J Obstet Gynecol Reprod Biol* 100:112–115
6. Schnorr JA, Singer JS, Udoff EJ, Taylor PT (1999) Late uterine wedge resection of placenta increta. *Obstet Gynecol* 94:823–825
7. Gupta A, Nanda S, Dahiya P, Chauhan M, Sangwan K (2003) Placenta percreta causing spontaneous uterine rupture in late pregnancy: conservative surgical management. *Aust NZJ Obstet Gynecol* 43:334–335