



# The Conservative Management of Placenta Previa Percreta: Presentation of Two Cases

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## Abstract

**Objective:** In this case report, we aimed to discuss two cases with placenta previa percreta who were managed and treated successfully by being applied methotrexate in the postoperative period.

**Methods:** Both of the two cases who were undergone operation immediately due to previous cesarean deliveries applied to our clinic as onset of labors. The placentas were left in uterus due to fertility desires of women who were diagnosed placenta percreta in surgery. The patients who were managed with conservative therapy were followed up by serum human chorionic gonadotrophin (hCG) levels, ultrasonography and magnetic resonance imaging. After therapy, decrease of serum hCG levels, vascularisation and size of the placenta were observed.

**Conclusion:** Placenta percreta which cause serious morbidity and mortality is one of the most important complications of pregnancy. To decrease morbidity and preserve fertility, conservative treatment may be thought firstly.

**Keywords:** Placenta previa percreta, conservative treatment, methotrexate.

## Plasenta previa perkretanın konservatif yönetimi: iki olgu sunumu

**Amaç:** Bu makalede, sezaryen ile fetüs doğurtulduktan sonra plasentaları yerinde bırakılan ve postoperatif dönemde metotreksat uygulanarak başarılı bir şekilde takip ve tedavileri yapılan plasenta previa perkretalı olguların tartışılması amaçlandı.

**Olgu:** Daha önceki doğumlarının da sezaryenle olması nedeniyle acil şartlarda operasyona alınan her 2 olgu da doğum eyleminin başlaması nedeniyle kliniğimize başvurdu. İntraoperatif plasenta perkreatı tespit edilen bu hastalarda plasantanın çıkarılması, morbiditeyi artırabileceğinden plasentalar uterin kavite içinde bırakıldı. Konservatif metotreksat tedavisi ile takibe alınan hastalar, postoperatif serum beta human koryonik gonodotropin (hCG) düzeyleri, ultrasonografi ve manyetik rezonans görüntüleme ile takip edildi. Tedavi ile serum betahCG düzeylerinde, plasantanın boyut ve vaskülarizasyonunda belirgin azalma izlendi.

**Sonuç:** Plasenta perkretı, ciddi morbidite ve mortaliteye neden olan gebeliğin oldukça önemli komplikasyonlarından biridir. Morbiditeyi azaltmak ve fertilitiyi korumak amacıyla konservatif tedavi öncelikle düşünülebilir.

**Anahtar Sözcükler:** Plasenta previa perkreatı, konservatif tedavi, metotreksat.

## Introduction

Placenta previa is defined as partial or complete closure of internal cervical os by placenta. It is a significant reason of obstetric bleedings and it is observed at a rate of 4.8% in each 1,000 deliveries in a year.<sup>[1]</sup> Morbidity and mortality risks increase when placenta previa is complicated with placentation anomalies such as accreta, increta and percreta.<sup>[2]</sup>

Placenta creta (abnormal placentation) is characterized by regional or common deficiency of decidua basalis. There are three types as placenta accreta where villi are attached to myometrium superficially but not invasive, placenta increta where it disperses to myometrium, and placenta percreta where placenta passes through myometrium completely and reaches serosa.<sup>[3,4]</sup>

Placenta percreta is the most severe form since it disperses to serosal layer of uterus and also has the potential to disperse through adjacent pelvic organs. Cesarean hysterectomy is generally required for life-threatening bleeding check. Conservative treatment can be applied to chosen patients who are stable hemodynamically. In this way, morbidity and blood transfusion amount will be decreases as well as protecting fertility of patient.<sup>[5]</sup>

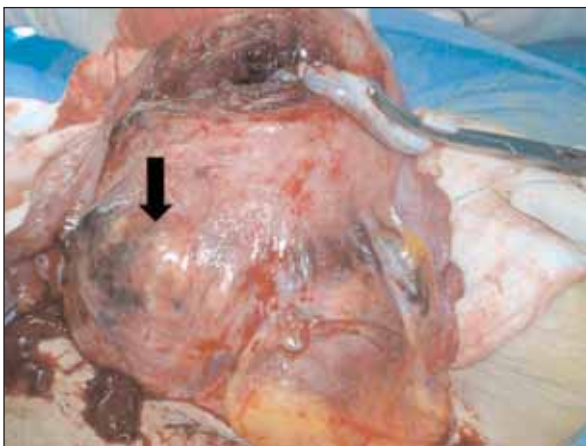
In this case presentation, we aimed to discuss two cases with placenta previa percreta which were applied methotrexate in postoperative period and successfully followed-up and treated.

## Case Reports

### Case 1

Thirty-six-year-old patient (g3 p2 y2) who had cesarean two times admitted to our clinic with pains and vaginal bleeding complaint. In the ultrasonographical evaluation, single alive fetus with fetal biometric measures consistent with 36th gestational week and total placenta previa were found. The patient with active vaginal bleeding and contractions was taken into emergency operation with these findings. Structure dispersing through serosa and bladder on inferior segment of uterus was observed in exploration and placenta percreta was considered (Figure 1). It was entered to the 1/3 superior part of uterus by transverse incision and 2,500 g baby girl was delivered with breech presentation, first minute Apgar score 7. It was decided to apply postoperative methotrexate for conserva-

tive treatment to the patient who was stable hemodynamically. Umbilical cord was cut after baby was delivered and it was tied from a point close to placenta, and placenta was left in uterine cavity (Figure 2). Due to the risk of postoperative vaginal bleeding, vaginal bleeding follow-up was performed at every 15 minutes on 1st postoperative hour and at every 30 minutes on 2nd hour, then hourly for first 24 hours after postoperative third hour. 50 mg/day methotrexate was applied on 1st, 3rd, 5th and 7th postoperative days and 0.1 mg/kg/day folic acid was applied on 2nd, 4th, 6th and 8th postoperative days. Ampicilline-sulbactam (2g/day, 2x1 g) and metronidazole (1,500 mg/day, 3x500 mg) intravenous treatments were applied to the patient for 2 weeks. During postoperative period, the patient was followed up by weekly serum  $\beta$ -hCG level, ultrasonography and monthly magnetic resonance imaging (MRI). In postoperative period,  $\beta$ -hCG levels were found as 9,258 mIU/ml on first day, 3,398 mIU/ml on first week, 1,068 mIU/ml on second week, 18 mIU/ml at the end of first month and 4 mIU/ml at the end of second month.  $\beta$ -hCG levels progressively decreased after the operation was found as 1.2 mIU/ml at postoperative 3rd month. In the ultrasonographical evaluations performed, it was observed that there was a significant decrease in dimension and vascularization of placenta. While dimension of placenta was 112x80x56 mm in the ultrasonography performed on postoperative 4th day, it was measured as 94x55x25 mm one month later. In the MRI performed on 3rd postoperative month, regression was reported in placental tissue volume.



**Figure 1.** Placental invasion to bladder (black arrow).



**Figure 2.** Appearance of uterus after closing (placenta is in the cavity).

## Case 2

Twenty-one-year-old patient (g2 p1 y1) who had cesarean in her first delivery admitted to our clinic with labor pains. In the ultrasonographical evaluation, single alive fetus with fetal biometric measures consistent with 38th gestational week and total placenta previa were found. The patient with active contractions was taken into emergency operation with these findings. Due to the location of placenta, it was entered to uterus by transverse incision through left superior side of uterus and 3,700 g baby boy was delivered with head presentation, first minute Apgar score 5 and placenta was left in the uterine cavity. Vaginal bleeding of the patient in postoperative period was followed up at every 15 minutes on 1st postoperative hour and at every 30 minutes on 2nd hour, then hourly for first 24 hours after postoperative 3rd hour. Informed consent was obtained by informing patient and patient relatives in detail, and 50 mg/day methotrexate was applied on 1st, 3rd, 5th and 7th postoperative days and 0.1 mg/kg/day folic acid was applied on 2nd, 4th, 6th and 8th postoperative days. Cefazolin (2 g/day 2x1 g) and metronidazole (1,500 mg/day 3x500 mg) were applied for postoperative 1 week. Patient was discharged on 10th postoperative day, but she was re-hospitalized when her temperature reached 38°C on 20th postoperative day and she had vaginal bleeding as staining. Since her body temperature could not be lowered and vaginal bleeding continued, patient and her relatives were informed about the decision of removing placenta tissue on operation room conditions on 23rd postoperative day and of doing emergency hysterectomy in case of excessive bleeding. Approximately 5x4 cm rest placenta tissue was curetted under operation room conditions and no high temperature and bleeding was followed up. The patient was discharged when -hCG level was found as 1.2 mIU/ml on 29th postoperative day.

## Discussion

Placenta percreta is a life-threatening situation with increasing incidence related with the increase in the incidence of cesarean operations.<sup>[5]</sup> Uterine surgery (cesarean, myomectomy) overgone or D&C, placenta previa, maternal age, multiparity, Asherman's syndrome, submucous leiomyoma can be considered among the risk factors. In terms of decreasing morbidity, it is essential to establish early and proper diagnosis and appropriate man-

agement by color Doppler ultrasonography and MRI.<sup>[6-9]</sup> MRI sensitivity was reported as 80-88% and MRI specificity was reported as 65-100%.<sup>[10]</sup> However, since our cases were the pregnant without antenatal follow-up and taken into emergency cesarean, it was not possible for us to make preoperative evaluation. MRI is quite beneficial for supporting diagnosis in antepartum period; follow-up of placenta left in uterine cavity in postoperative period can be done by ultrasonography which is a cheaper method.

For the management of placenta percreta, two strategies have been defined as hysterectomy and conservative treatment. While hysterectomy was required generally for bleeding control in the past, today hysterectomy is sufficient for bleeding control in percreta cases and even unsuccessful in some cases; therefore, it may cause maternal morbidity and mortality. Notwithstanding, placenta percreta cases that are stable hemodynamically can be treated by methotrexate conservatively. Uterine artery embolization is another conservative method which can be applied in cases who want to preserve their fertility.<sup>[11,12]</sup>

Few studies in the literature are reported about adding methotrexate to the treatment. Among these studies, Heiskanen et al. reported that conservative treatment of placenta percreta by methotrexate is an appropriate treatment method for preserving fertility in patients who do not have active bleeding and are stable hemodynamically.<sup>[13]</sup> Mussalli et al. emphasized that methotrexate has a significant role in rapid resolution of vascular invasion of bladder in patients with placenta percreta.<sup>[14]</sup> Similarly, Sonin also reported that a case with placenta percreta was successfully treated by methotrexate.<sup>[15]</sup> Uterine scar belonging to previous cesarean operations and total placenta previa exist as risk factors in both cases presented in this study. In both our cases, placenta was left in their locations and successful results were obtained by methotrexate treatment. Morbidity and mortality risks that would develop by hysterectomy were minimized by conservative approach.

## Conclusion

In conclusion, placenta percreta which cause serious morbidity and mortality is one of the most important complications of pregnancy. To decrease morbidity and preserve fertility, conservative treatment may be thought firstly.

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