

## A Planned Cesarean Section-Hysterectomy for Placenta Previa Totalis Percreta in Patient with History of Two Cesarean Sections

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### Abstract

The presence of placenta previa may be associated with placenta accreta<sup>[1]</sup>. Maternal and fetal morbidity and mortality from placenta previa accreta are considerable and are associated with high demands on health resources. With the rising incidence of caesarean sections combined with increasing maternal age, the number of cases of placenta praevia and its complications, including placenta accreta, will continue to increase<sup>[2]</sup>. Here, we present a case of placenta previa totalis percreta in previous cesarean section twice. In this case, patient with placenta previa totalis-percreta we diagnosed and prepared proper management with the involvement of multidisciplinary team. We reduced blood loss by performing total abdominal hysterectomy immediately after delivered the baby and the postoperative course was uneventful.

**Keywords:** *Cesarean Section-Hysterectomy, placenta accreta, placenta percreta, placenta previa*

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### Introduction

Placenta previa may be associated with placenta accreta<sup>[1]</sup>. *Placenta accreta* is a general term used to describe the clinical condition when part of the placenta, or the entire placenta, invades and is inseparable from the uterine wall<sup>[2] [3]</sup>. Such abnormally firm attachment of the placenta might be anticipated because of poorly developed decidua in the lower uterine segment. Placenta percreta is one of the most serious complications of placenta accreta that penetrates the myometrium of the uterine wall.

It is a life threatening condition, frequently associated with severe obstetric hemorrhage blood transfusions and a cesarean hysterectomy usually necessitating for to control the significant blood loss.

The maternal and fetal morbidity and mortality from placenta accreta are considerable and associated with high demands on health resources<sup>[2] [3]</sup>. A positive correlation can be seen between the incidence of placenta accreta and the rising rate of caesarean section<sup>[2] [4]</sup>. Damage to the uterus created by surgery leaves patients susceptible to the acquisition of future placenta accreta.

The occurrence of placenta previa, uterine scarring and increased maternal age are risk factors in contributing to the incidence of placenta accreta and this ultimately poses a significant burden on health resources. A multidisciplinary approach is necessary in managing this serious complication<sup>[4]</sup>. We present a case of placenta previa percreta diagnosed by ultrasound, in which we accomplished a well planned cesarean section-placenta left in situ-hysterectomy.

### Case

A 41-year-old (gravida 3, para 2) on her 35 weeks of gestation came for the first time to the our outpatient department in Siloam public hospital for prenatal check-up. The patient had previous prenatal check-up in a clinic with midwife without ultrasound examination. She had two previous cesarean section due to dysfunctional labor arrest in cervical dilatation. She denied any history of vaginal bleeding. 2D-ultrasound performed, revealed an alive single intrauterine pregnancy in transverse lie position, biometry appropriate to 35 weeks of gestation with adequate amniotic fluid, normal fetal heart tone 146 beats per minute. The placenta totally covered the cervix, suspected placenta accreta. Patient had never experienced vaginal bleeding.

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Patient then referred to the Maternal-Fetal Medicine Department for confirmation of the placenta accreta.

The ultrasound and color-Doppler examination confirmed the placenta previa totalis accreta-percreta.



Figure 1.

2D transabdominal ultrasound showed the absence of placental- miometrial interface, the uterine wall is undistinguishable from the placenta, and the presence of multiple vascular intraplacental lacunae “Swiss cheese” placental appearance

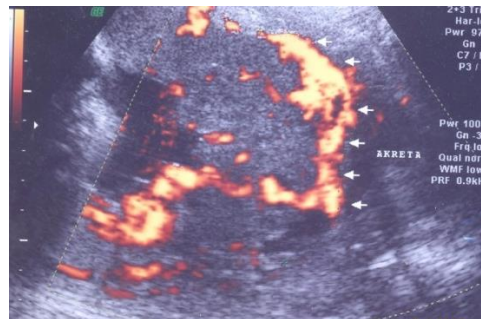


Figure 2.

2D color Doppler ultrasound revealed an extensive vascularity along the anterior portion of the lower uterine segment and appeared to extend up to and around the bladder

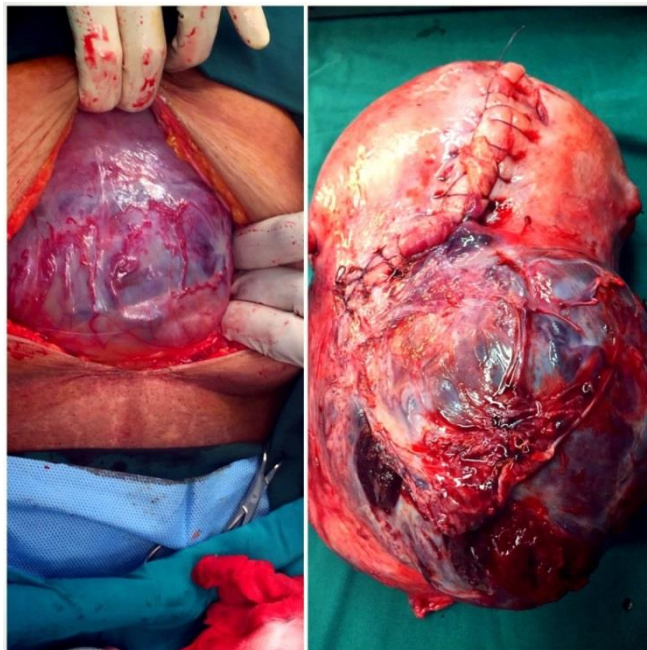


Figure 3.

(Left) – On exploration, the black arrow showed placenta percreta, chorionic villi penetrate the full thickness of the myometrium and invade the bladder.

(Right) – After surgery-total abdominal hysterectomy, the uterus with placenta in situ.

## Discussion

The incidence of placenta accreta has increased and seems to parallel the increasing cesarean delivery rate. Researchers have reported the incidence of placenta accreta as 1 in 533 pregnancies for the period of 1982–2002<sup>[2]</sup>. This contrasts sharply with previous reports, which ranged from 1 in 4,027 pregnancies in the 1970s, increasing to 1 in 2,510 pregnancies in the 1980s<sup>[3]</sup>. Placenta previa may be associated with placenta accreta<sup>[1]</sup>. Placenta accreta is classified according to its degree of invasion into the myometrium : placenta accreta, placenta increta, and placenta percreta. *Placenta accreta* is a term used to denote a placenta with villi that adhere to the superficial myometrium. *Placenta increta* This maneuver causes massive hemorrhage that is often quite challenging to control. A firm preoperative diagnosis allows adequate preparation and organization of multidisciplinary help for what may be a difficult surgical procedure requiring massive blood transfusion<sup>[6]</sup>.

First line imaging modalities for the diagnosis of placenta accreta include gray-scale ultrasound (2D ultrasound) and color Doppler. MRI is used as an adjunct tool to improve sensitivity when sonographic examination is equivocal or when the placenta cannot be reliably visualized<sup>[7]</sup>.

occurs when the villi adhere to the body of the myometrium, but not through its full thickness. *Placenta percreta* occurs when the villi penetrate the full thickness of the myometrium and may invade neighboring organs such as the bladder or the rectum<sup>[5]</sup>. Predisposing factors other than previous caesarean sections include all previous myometrial damage from myomectomy, manual removal of the placenta, complicated uterine curettage, and leiomyomas<sup>[3]</sup>. Bladder invasion by the placenta percreta is a potentially life-threatening obstetric complication, albeit a rare one. The diagnosis is usually established when attempts are made to separate the adherent placenta from the bladder.

Overall, gray scale ultrasonography is sufficient to diagnose placenta accreta, with a sensitivity of 77–87%, specificity of 96–98%, a positive predictive value of 65–93%, and a negative predictive value of 98<sup>[3]</sup>. The use of power Doppler, color Doppler, or 3D imaging does not significantly improve the diagnostic sensitivity compared with that achieved by gray scale ultrasonography alone<sup>[2]</sup>. The 2D ultrasound criteria for the diagnosis of placenta accreta in at-risk patients are obliteration of the retroplacental echolucent zone, abnormal prominent placental lacunae and thinning or disruption of the

hyperechoic uterine serosa–bladder interface<sup>[8]</sup>. These lacunae may result in the placenta having a “moth-eaten” or “Swiss cheese” appearance<sup>[3]</sup>, as seen in Figure 1.

The value of diagnosing placenta accreta before delivery is to maximize planning and assemble a multidisciplinary team. Ideally when delivering, there should be a Consultant grade Obstetric surgeon and anesthetist. If possible input from pelvic surgeon such as a gynecologic oncologist, maternal–fetal medicine specialist, neonatologist, urologist, vascular surgeon, and interventional radiologist should be included to optimize the patient’s outcome<sup>[3]</sup>. There are a many considerations for management depending on the severity of hemorrhage, including life-saving hysterectomy. Ensuring sufficient blood for transfusion and early transfer to a tertiary care center must be considered. There is some

controversy regarding the benefit of interventional radiology with balloon catheterization to reduce blood loss<sup>[9]</sup>. Postpartum hemorrhage and maternal mortality are of such high risk in these patients that proper diagnosis and planning is the key to improved-outcomes.

In this case, with a proper diagnosis and well planned management, we can prevent a large amount of blood loss. A proper diagnosis of placenta accreta is highly recommended when physicians find patient with placenta previa and histories of cesarean section. The value of ultrasound is very important and further imaging modalities such as MRI to assist in making the accurate diagnosis in high risk patients with previous uterine scars, together with appropriate training and multidisciplinary input to improve patient outcomes.

### References

1. Cunningham FG, Gant NF, Leveno KJ, Gilstrap LC, Houth JC, Wenstrom KD. William’s Obstetric.Obstetrical Hemorrhage, 24<sup>th</sup> ed. London: McGrawHill, 2014
2. RCOG “Placenta Praevia, Placenta Praevia Accreta and Vasa Praevia: Diagnosis and Management: Green–top Guideline No. 27, January 2011
3. ACOG. “Placenta accreta”. Committee Opinion No. 529. American College of Obstetricians and Gynecologists. *Obstet Gynecology* 2012;120:207–11.
4. A. Johnston, S. Paterson-Brown, “Placenta Praevia, Placenta Praevia Accreta and Vasa Praevia: Diagnosis and Management”. Royal College of Gynecology, Green-top Guideline No. 27 p.1-26
5. Poggi SBH, Kapernick PS. Postpartum hemorrhage and abnormal puerperium. In: DeCherney AH, Nathan L, editors. *Current Diagnosis and Treatment Obstetrics and Gynecology*. 10th ed. New York: McGraw-Hill Medical; 2007.
6. Abbas F, Talati J, Wasti S, Akram S, Ghaffar S, Qureshi RJ *Urol*. 2000 Oct; 164(4):1270-[PubMed] [Ref list]
7. M. Maher, A. Abdelaziz, M. Bazeed. “Diagnostic accuracy of ultrasound and MRI in the prenatal diagnosis of placenta accreta.” *Acta Obstet Gynecol Scand*. 2013 Sep;92(9):1017-22
8. C. Comstock, J. Love Jr, R. Bronsteen, W. Lee, I. Vettraino, R. Huang, R. Lorenz. “Sonographic detection of placenta accreta in the second and third trimesters of pregnancy.” *American Journal of Obstetrics and Gynecology*. 2004 Apr;190(4):1135-40. PubMed PMID: 15118654. <http://dx.doi.org/10.1016/j.ajog.2003.11.024>
9. R. Resnick, “Management of the Morbidly adherent placenta (Placenta Accreta, Increta, and Percreta). Up-to-date. Last updated: May 12, 2015.