



## Extensive Hemorrhage during C-section of a Placenta Percreta with Bladder Invasion - Case Report

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### Abstract

Morbidly Adherent Placenta is a clinical condition where the placental tissue implants abnormally to the myometrium. In rare situations, the placenta can pass through the myometrium and invade organs surrounding the uterus; this is referred to as Placenta Percreta. This high morbidity condition can lead to a massive hemorrhage during surgery along with other various complications. We report a case of a 35 year old woman with no previous diagnosis of Placenta Percreta. During C-section, extensive placental invasion of the bladder and massive hemorrhaging was identified. Post hysterectomy, after a failed attempt to mitigate abdominal bleeding, the use of a Bogota bag was deemed necessary.

### Keywords

Placenta accreta, Placenta percreta, Bogota bag, Hemorrhage

### Abbreviation

MAP: Morbidly Adherent Placenta, MRI: Magnetic Resonance Imaging

### Introduction

Abnormal implantation of the placenta in the myometrium, known as MAP (Morbidly Adherent Placenta), can be a life threatening clinical condition. Early detection of this condition is imperative to ensure a proper management plan and can be implemented in order to mitigate risk for the patient [1]. Once the placenta has invaded the surrounding organs, known as Placenta Percreta, the threat of hemorrhage and other complications becomes imminent<sup>2</sup>. Operative planning and team preparation are essential to decrease the morbidity of MAP [1].

### Case Report

A.S.C, female, 35 years old, gravida 3 parity 2, gestational age of 32 weeks and 1 day, went to the obstetrics emergency reporting a loss of a small amount of fluid. A physical exam showed that the patient had a blood pressure of 100/70mmHg, temperature of 35,6°C, no tenderness or pain in abdomen, no evidence of vaginal bleeding and a normal fetal heart rate. An Ultrasound showed complete Placenta Previa and an Amniotic Fluid Index of 2cm.

After an episode of vaginal bleeding, the patient was sent to have a C-section. During the surgery Placenta Percreta with extended placental invasion to bladder was reported. A transversal uterine fundal incision was used to deliver the fetus and also to avoid an incision into the placenta. The uterus was elevated outside the abdominal wall. The surgical team attempted to separate the bladder from the adhesions, but bleeding ensued. Due to difficult to manage abdominal bleeding a subtotal hysterectomy was performed and pieces of the placenta were left attached to the bladder. The placental hemorrhaging was tamponed with two sterile compresses inside the abdomen, and then closed with a Bogota bag. During surgery four units of blood were transfused and patient was later admitted in the ICU.

After two days, the patient was submitted to a new surgery to remove the Bogota bag. Laparotomy revealed the expected result: there were no more active bleeding and bladder wall had epiploon adhesions. Hemostasis was reviewed carefully. 100mg of Methotrexate was initiated on alternate days.

### Discussion

According to The American College of Obstetricians and Gynecologists, MAP is a clinical condition where the placental tissue completely or partially invades the myometrium. Incidences of this condition have been increasing over the years, and it appears to be connected to the increase of cesarian deliveries [1,2].

A diagnosis of MAP before delivery can lead to a better management plan for the patient and can usually be done in the second or third trimester. Transvaginal and transabdominal ultrasonography can be used as a diagnostic technique [3]. D'Antonio et al. performed a systematic review and meta-analysis to assess the performance of ultrasound in at-risk women for prenatal detection of invasive placentation. It was seen that an ultrasound has a Sensitivity of 90.72% and Specificity of 96.94%, where it was concluded that ultrasound has a high accuracy for prenatal diagnosis of disorders of invasive placentation in high risk women [4].

MRI (Magnetic Resonance Imaging) is an alternative option to confirm the findings of the ultrasound or if the ultra-sound was

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inconclusive [1,3]. The use of MRI as a routine for MAP is still questionable [3].

Placenta Percreta is a rare condition where the placenta passes through the myometrium and can invade surrounding adjacent organs. Due to the high possibility of massive blood loss and high surgical risk, it is generally required that a c-section is followed by a hysterectomy [5,6]. This condition can increase the rate of morbidity such as infection, organ injuries, venous thromboembolism and complications related to massive blood transfusion [7]. The mortality rate can be up to 7% [3,6].

The Bogota bag is a transparent, strong, resilient and flexible bag that can be used for managing complex abdominal injuries, wounds and infections. A review by Michael C et al. regarding successful innovations in surgical care discussed how the Bogota bag is an efficient method of temporary abdominal closure [8]. The bag was attached temporarily to the edges of the patient's abdominal wound and functioned as patch over the large laparotomy field. In our patient, the bag held and stabilized the hemorrhage.

In conclusion MAP can be a life threatening clinical condition, that requires a coordinated operative plan, a well trained team and adequate assistance for possible complications intra and postoperative.

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