

## CASE REPORT

# PLACENTAL ACCRETISM: CESAREAN - HISTERECTOMY A SERIES OF CASES

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## ABSTRACT

Introduction: Acretism is the implantation of the abnormal placenta in the uterine wall, it is classified according to the degree of depth. The incidence of accretion increased worldwide in parallel with the increase in cesarean sections, with 1 case for every 533 births. Objective: To evaluate cesarean surgery / hysterectomy (placenta in loco) as a healthy maternal-fetal binomial resolution. Method: case series. Discussion: The best therapeutic proposal in cases of accretism is the planning of cesarean delivery followed by total abdominal hysterectomy (THA). Conservative treatment (maintenance of the uterus leaving the placenta in situ) due to the associated high morbidity and mortality should be considered exceptionally. The patient profiles of the cases fit the risk factors mentioned in the studies. All cases had previous cesarean section and diagnosis of placenta previa; average age: 36.8 years (32-41 years); average parity (gestation): 2.8 (G4-G2). Thus, we are going to meet what the literature cites as the main risk factors. Case 2 was scheduled for cesarean delivery and hypertension. However, during cesarean section, the uterus was preserved and evolved to hemorrhagic shock 4 hours after the end of the procedure, requiring THA in the 2nd period. In cases 1, 3 and 4, cesarean delivery and hypertension were planned without complications. In all cases, the final treatment evolved with hysterectomy, meeting the literature as the best therapy. Final considerations: Good conduct in the face of accretism with prior diagnosis through USG and Doppler, delivery planning in a referral center (reserve of hemoconcentrates and ICU) with an experienced and multidisciplinary team has the power to change the prognosis.

**KEYWORDS: PLACENTAL ACCRETISM, CESAREAN SECTION, HYSTERECTOMY.**

## 1 INTRODUCTION

The placenta accreta is defined when the implantation occurs abnormally in the uterine wall, passing the endometrium, invading the myometrium, which may become serous or invade other organs<sup>1,2</sup>.

Normally the chorionic villi penetrate the compact and superficial portion of the decidua, and do not reach the spongy layer. This allows the cleavage of the placenta to be detached. Endometrial and myometrial damage are responsible for abnormal placental implantation, with a thin or absent basal decidua (spongy layer) and imperfect development of the fibrinoid layer (Nitabuch layer)<sup>1,3</sup>. The penetration into the spongy layer and the myometrium prevents dequitation and is characteristic of placental accretism<sup>1,4</sup>.

The ACOG (American Congress of Obstetricians and Gynecologists) reported, in 2012, that the incidence of accretism increased worldwide in parallel with the increase in cesarean sections, with 1 case for every 533 deliveries<sup>5</sup>. In

1950, the occurrence was very rare, 1 for every 30,000 births<sup>6</sup>.

Early diagnosis is of fundamental importance in this pathology. Pregnant women with previous history of previous cesarean section, placenta previa, multiparity, maternal age greater than 35 years, endometrial defects have an increased risk for accretism. Thus, ultrasonography (USG) should be requested to assess the placenta, as it is a great diagnostic method. When the USG is not clear, magnetic resonance imaging (MRI) 1.5 can be requested.

Accretism has a high mortality rate of 6 to 7%, the main complication of which is hemorrhagic shock, which can aggravate the clinical picture and develop with disseminated intravascular coagulation (DIC), adult respiratory distress syndrome, renal failure and even maternal-fetal death<sup>1, 5,7,8</sup>.

The incidence of placental accretism is on the rise and birth planning with cesarean section and total abdominal hysterectomy (TAH) through previous diagnosis has the power to change this disease's prognosis.

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Therefore, the objective of this work is to evaluate cesarean surgery/hysterectomy (placenta in loco) through a series of cases as a healthy maternal-fetal binomial resolution.

### CASE REPORTS

Case 1 - Patient, VGS, 38 years old, G4PC3A0, resident of Goiatuba in Goiás, prenatal in her city with the presence of toxoplasmosis during pregnancy being treated with spiramycin, denying other comorbidities and without complications. Due to the diagnosis of toxoplasmosis, she was referred to Goiânia where she performed amniocentesis, discarding vertical transmission, but discovered a complete central placenta previa accreta. The patient did not present bleeding at any time during pregnancy or other complications. Thus, an elective cesarean section with abdominal hysterectomy was scheduled after 38 weeks 3 days on 05/09/2020. The planning of cesarean-hysterectomy contained: prior preparation of a blood bank, cross-testing of the same reserve of 4 red blood cell concentrates and 2 plasma units, previous reservation of maternal and neonatal ICU, organization and preparation of anesthesia with continuous monitoring followed by spinal anesthesia followed general anesthesia; bladder catheterization; Pfannenstiel incision and with high body uterine incision, with fetal withdrawal without placental handling; total abdominal hysterectomy, with placenta in place; referral for immediate postoperative care in the ICU. During the surgery, the patient received the 4 bags of hemoconcentrates and 2 units of plasmas that had been provided. The patient was stable and did not need to stay in the ICU, being discharged 2 days after delivery.

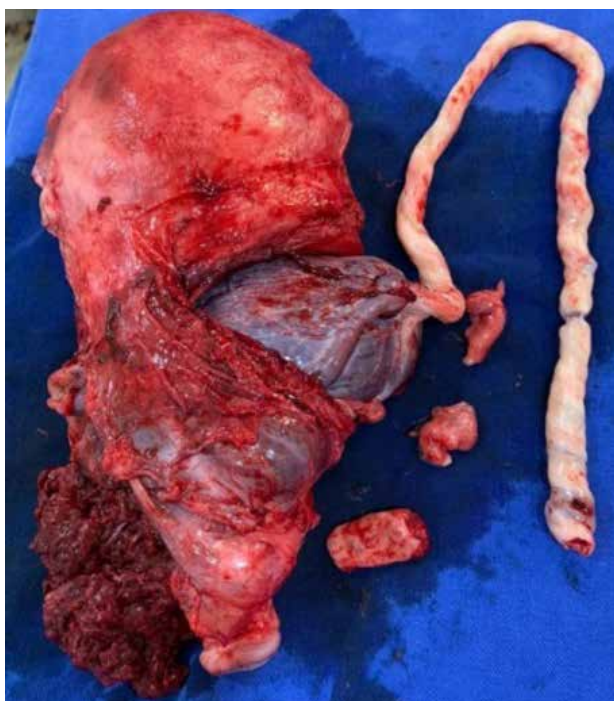


Figure 1: Image of the surgical specimen in case 1 containing the uterus with placental accretism.

Source: Dr Waldemar's archive.

Case 2: Patient, LOM, 41 years old, G2PC1A0, resident of Goiatuba in Goiás, prenatal in her city, treated hypothyroidism during pregnancy with Puran 50mcg, without other comorbidities and complications. During the follow-up of the pregnancy at 32 weeks she discovered a posterior central complete placenta previa with accretism and therefore she was sent to Goiânia. The patient did not present bleeding at any time during pregnancy or other complications. Thus, an elective cesarean section with abdominal hysterectomy was scheduled after 39 weeks on 07/05/2020, but the husband during the surgery asked the medical team to try to preserve the uterus. Then, during the procedure, the therapeutic planning was changed and conservative treatment was maintained, keeping the uterus with placenta in place. Four hours after the end of the surgery, the patient presented hemorrhagic shock, requiring a re-approach and hysterectomy. During surgery, the patient received the 4 bags of hemoconcentrates and 2 units of plasmas provided and was sent to the ICU, where she stayed for 15 days. In the intensive care unit, she had to be transfused with 2 more bags of hemoconcentrate and had pulmonary complications (pneumonia) with the need to stay intubated for 2 days. After discharge from the ICU, she stayed in the room for 2 days and was discharged.

Case 3: Patient, NVCO, 36 years old, G3PC2A0, mono-chorionic and diamniotic twin pregnancy, living in Anápolis in Goiás, prenatal in her city with the presence of gestational hypertension with pre-eclampsia and maternal tachycardia, followed by a cardiologist, in addition to the prenatal. At 22 weeks of gestation, fetus-fetal transfusion and a central complete placenta previa with accretism were discovered and therefore the patient was sent to Goiânia and underwent laser fetoscopy and pulmonary maturation without interurrences. She started persistent vaginal bleeding from the placenta previa at 25 weeks of gestation, and termination of pregnancy at 27 weeks and 5 days was indicated. On 9/11/2020, a cesarean section was performed with planned abdominal hysterectomy as mentioned in case 1, with 3 transfusions of hemoconcentrate and 2 of plasma transfused during the operation. The surgery took place as proposed, she was hospitalized for 2 days in the ICU and another 5 days in the room being discharged. The newborns died due to prematurity and the patient triggered depression.

Case 4: Patient, TGCOL, 32 years old, G2PC1A0, resident of Jataí in Goiás prenatal care in her city without comorbidities or complications during pregnancy, absence of Mullerian malformation and/or presence of previous leiomyomatosis. Since the beginning of pregnancy, she had been diagnosed with a placenta previa, but at 30 weeks she identified a central complete placenta previa with accretism, thus beginning follow-up in Goiânia and lung maturation. At 33 weeks and 1 day, vaginal bleeding started, with a cesarean section scheduled with planned hysterectomy on 10/7/2020 as mentioned in case 1. The procedure proceeded as planned, and was then referred to

the ICU. She was admitted to the ICU for 2 days and was discharged 1 day later in good general condition.

## DISCUSSION

The obstetrician identifying the risk factors, making the preoperative diagnosis (ultrasound) and treating the intrapartum appropriately changes the prognosis of placental accretism.

The patient profiles of the cases fit the risk factors mentioned in the literature. All cases had previous cesarean section and diagnosis of placenta previa; average age: 36.8 years (32-41 years); average parity (gestation): 2.8 (G4-G2). Thus, we are in agreement with what the literature says as risk factors: anterior cesarean section, placenta previa, multiparity and maternal age greater than 35 years.

Ultrasonography (USG) with Doppler favors visualization by turbulent flow, in addition to the disappearance of the retroplacental hypoechogenic space anterior to the myometrium and the appearance of dilated vessels in the myometrium itself. USG associated with Doppler has a sensitivity of 81.1% and specificity of 98.9%. However, if analyzing the anterior and posterior placentas separately, 89.7% and 50% detection rate are observed respectively<sup>8,9</sup>.

In this work, in all presented cases, the patients underwent Doppler ultrasonography, having previously been diagnosed with placental accretism, enabling birth planning.

The best therapeutic proposal in suspected and confirmed cases of accretion is the planning of cesarean delivery followed by total abdominal hysterectomy<sup>1,10,11</sup>.

Total abdominal hysterectomy is the ideal treatment for cases of placental accretism; after extraction of the fetus, it must be performed with the placenta in situ, as attempts at detachment often result in severe hemorrhage<sup>1</sup>.

Peripartum hysterectomy is the best option for those who have no desire to gestate<sup>10,11</sup>.

The doctor has to advise pregnant women and their families about the pre, intra and postoperative risks (blood transfusion, organ damage, ICU, infection and risk of death). The procedure with a well-trained team in a place of reference (blood components reserve, ICU) is of extreme importance<sup>5</sup>.

In cases 1, 3 and 4, cesarean deliveries were planned followed by abdominal hysterectomy, in no case did we have complications and interurrences. Reaffirming that the planning (pre, intra and postoperative) of cesarean section with TAH improves the prognosis of placental accretism and goes against the studies.

Conservative conduct in accretism (leaving the placenta in situ) can be chosen in rare situations with a view of preserving fertility; however, these patients must remain under strict surveillance and receive information about a significant risk of serious complications<sup>1</sup>.

Conservative treatment (maintenance of the uterus leaving the placenta in situ) due to the associated high morbidity and mortality should be considered exceptionally<sup>12</sup>.

In case 2, a cesarean delivery was scheduled with ab-

dominal hysterectomy (TAH), but during the procedure it was decided to preserve the uterus with placenta in situ. The patient evolved with hemorrhagic shock 4 hours after the end of the surgery, requiring an emergency hysterectomy in the second stage. Conservative treatment should be left as an exception, as it has a high risk of complications.

In all cases reported, the final treatment evolved with TAH, in line with the literature as the best treatment. Conservative treatment (maintenance of the uterus leaving the placenta in situ) exposes the patient to many complications and should be chosen in rare cases after exhaustive medical guidance for pregnant women and their families.

The ideal gestational age (GA) for the intervention is still controversial. There is an agreement that should be between 34 to 37 weeks due to pulmonary maturation<sup>10</sup>. For Zugaib (2016) an elective cesarean section with 36/37 weeks is recommended for patients with an early diagnosis to reduce the complication rate<sup>1</sup>.

The average gestational age of termination of pregnancy in all cases was 34weeks (w) 6 days (d) (27w6d - 39w0d). In case 3, it was a monorionic and diamniotic twin pregnancy with fetus-fetal transfusion. It was interrupted with 27 weeks and 5 days due to vaginal bleeding, the fetuses were born alive, but did not survive due to prematurity. In all other cases, all newborns survived.

## FINAL CONSIDERATIONS:

Placental accretism is a pathology with high mortality, but good conduct with early diagnosis and delivery planning has the power to improve the prognosis.

Prior diagnosis is of fundamental importance in this pathology. Therefore, pregnant women with history of previous cesarean section, placenta previa, multiparity, maternal age greater than 35 years, endometrial defects have an increased risk for accretism. Anterior cesarean section is considered the most relevant risk factor, associating the greater the number of surgeries, the greater the risk of placenta accreta.

Ultrasonography is a great tool for assessing placental pathologies, so if requested during prenatal care for patients with risk factors, early diagnosis will help to schedule appropriate treatment.

The planning (pre, intra and postoperative) of delivery with pulmonary maturation, reserve of hemoconcentrates, in a tertiary hospital with maternal and neonatal ICU and an experienced multidisciplinary team changes the prognosis of placental accretism, improving maternal-fetal survival.

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