Placenta Accreta: Case Report From Ultrasound Diagnosis to Treatment

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Introduction

Placental attachment disorder encompasses a spectrum of conditions characterized by abnormal adherence of placenta to the implantation site, with three variants classified according to their degree of trophoblastic invasion through the myometrium and the uterine serosa.

Placenta accreta is the most common variant and is defined as trophoblastic attachment to the myometrium without intervening decidua [1]; placenta percreta is the most serious variant because placenta invades the uterine serosa. All variants are associated with a significant increase in maternal morbidity and mortality, mainly due to bloodloss, local organ damage, urgent hysterectomy (33-50%) and postoperative complications [2,3]. Placenta previa and previous uterine surgery are the major risk factors for invasive placentation [4,5]. Placenta previa is defined as a placenta that either lies in close proximity to the internal cervical os or partially or completely covers it [1]. Placenta previa and accreta and their complications are increasing due to a higher number of Cesarean sections being performed and advanced maternal age [1-6]. Although placenta previa isoper se a risk factor, the most common is a uterine scar. The risk increases from 0.3% after one prior Cesarean section to 0.6, 2.1, 2.3 and 6.7% after two, three, four and more than four Cesarean sections, respectively [7]. The principal maternal complication is massive hemorrhage, that then leads to disseminated intravascular coagulation, multi organ failure and even death; Wright et al estimated a median bloodloss in cohorts of accretas from 2.000 to 7800 ml [8]. Peripartum hysterectomy rates is 30-55% [9] and maternal death has been reported in 5-7% of cases [10]. As there are reports in the literature that maternal complications, such as peripartum blood loss and need for blood transfusion, are reduced when the delivery is arranged in a centre of excellence, an accurate antenatal diagnosis of invasive placentation is important [9,11,12]. Further more prenatal diagnosis allows for optimal management, which typically includes planned cesarean hysterectomy before the onset of labor or bleeding [10]. In referred center a case of placenta accreta is managed by a multidisciplinary team that includes specialists in maternal-fetal medicine, obstetric ultrasound, gynecologic surgery and oncology, urologic surgery, transfusion medicine, intensive care, neonatology and anesthesiology.

It’s important to refer cases of placenta accreta to a centre of excellence, also for the diagnosis: in fact, ultrasound sensitivity in the second trimester of pregnancy for the identification of placenta accreta with expertsonoperators and in case of anterior placenta previa is reported to be 80-90% [10,3,13]. Ultrasound criteria suggesting placenta accreta spectrum are: loss of the hypoechoic area between the uterus and placenta (the ‘retroplacental clear zone’), thinning or interruption of the uterine serosa-bladder wall interface, myometrial thickness<1mm, turbulent placental lacunae with high velocity flow (>15 cm/s), increased and irregular subplacental vascularity, vessels between placenta and bladder [13-15]. The optimal timing of delivery for placenta accretas and its variants remains controversial: the risks of prematurity must be balanced against the risk of emergency delivery in the setting of labor or bleeding. Time of delivery should be individualized, but it may be reasonable to plan between 34 and 35 weeks of gestation, until 36 weeks in stable and asymptomatic patients (without bleeding episodes and contractions) [10,12,16]. Hospitalization is recommended for patients with bleeding or for patients that live far from an appropriate medical center. The delivery should be performed in an operating room with support services needed to manage potential complications. Institutionally established massive transfusion protocols should be followed and packed red blood cells and plasma should be available in the operative room [10,16]. In case of placenta accreta the abdominal incision should allow for easy performance of a difficult hysterectomy, typically a vertical cision, and the optimal surgical approach is fundal hysterectomy to avoid touching placenta. The use of pelvic devascularization with balloon catheters in internal iliac arteries or surgical hypogastric artery ligation is...
controversial because of the important collateral circulation to the uterus with placental attachment disorders [10,12,16,17].

Case Report

A 37 years old, Egyptian woman with 3 previous cesarean section was referred to our centre for important anemia (hemoglobin 6.5 g/dL) without bleed in gat 24 weeks of gestation. Previous ultrasound exam were done in Egypt. At ultrasound control a placenta previa major (anterior placenta that cover and passes internal uterine orifice) was diagnosed, with these signs of accretism: placental lacunae (Figure 1), in existent myometrial thickness (Figure 2) from istmic zone to the cervix, not visualization of retro placental clear zone (Figures 3 & 4), discontinuity of the line between uterus and bladder (Figure 4) increased and irregular placental vascularization (Figure 5), especially between uterus and bladder (Figure 6), the presence of large vessels in right parametrium (Figures 7 & 8). Blood transfusions of 4 blood units and corticosteroids prophylaxis for neonatal respiratory distress syndrome were performed; during the hospitalization there were no contractions and vaginal blood loss, so the woman went home from 28 to 31 weeks. Then at 31 weeks there was a small bleeding and so the patient was hospitalized again.

The delivery was planned at 34 weeks of gestation after a rescue dose of corticosteroids because the presence of contractions and the bleeding episode. The delivery was planned with multidisciplinary expert team with 2 anesthesiologist, three experts in gynecological oncology surgery, with immediately available transfusion, blood recovery equipment and neonatology team in surgical room.
The abdomen lincision was vertical and the fetus was delivered bay incision on the fundus to avoid compromising placenta percreta. Placenta appeared to reached seorsa without myometrium in the anterior part of the uterus (Figure 9). Then the cord was bounded, the placenta was left in situ and the incision was closed. Then surgeries isolated and proceeded with left hypogastric artery ligations. In the right side therewas an important vascularization (described during the ultrasound exams) with large vessels and so they didn’t proceed with pelvid evascularization. Then they made total hysterectomy, before identification of ureters (Figure 10). Total blood loss was of 1500 ml, of which 300 ml were infused. Pathological examination confirme the presence of placenta accreta and increta, myometrium of only 1 mm in the istmicportion (Figures 11-13). The woman was trasferred in intensive therapy for 3days. The baby born with Apgar score of 7/8, weight 2550 g, transferred in intensive neonatal therapy. Mother and baby went home after 9 days.

References

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