



Central placenta praevia accreta with focal bladder percretism. Conservative management



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Vito Leanza*, Maria Giovanna Verzi*, Fortunato Genovese*, Francesco Maria Colaleo*,
Gianluca Leanza**, Marco Palumbo*

*Department of Medical Surgical Specialties, University of Catania, Italy

**Obstetric Gynecologic Unit, S. Marta and S. Venera Hospital, Acireale, Catania, Italy

Central placenta praevia accreta with focal bladder percretism. Conservative management

Placenta praevia is a condition when placenta is inserted in an abnormal position near or over the internal cervical orifice (ICO). Abnormal placental attachment (placenta accreta, increta, percreta) is a wide spectrum disorder ranging from abnormal adherence to deeply invasive placental tissue. We report a very rare case of central placenta praevia accreta and focal bladder percretism in a 29 years old pregnant woman with an obstetrical history of one previous vaginal delivery and four curettages following miscarriage. She was taken in charge by Catania S. Marco' university-hospital at 20 weeks with diagnosis of Central Placenta Praevia and Accreta (CPPA) detected by means of ultrasounds (US). At 31 weeks Magnetic Resonance Imaging (MRI) confirmed CPPA with focal bladder percretism. After alerting multi-disciplinary team and obtaining blood units available, a Caesarean Section (CS) at 34 weeks was planned, when by means of US a detachment area with bleeding was observed. An adequate informed consent was completed, where the pregnant woman and her husband accepted the risk of possible hysterectomy and blood transfusions. A Pfannestiel's laparotomy with transversal corporal uterine incision, bilateral uterine ligation, packed tamponage, removal of placental tissue separated during fetal extraction and leaving a portion of placenta only in the place of percretism, allowed conservative intervention (uterus preservation) ending in good results for both mother and fetus.

KEY WORDS: Caesarean section, Curettage, Placenta praevia, Placenta accreta, Preterm birth

Introduction

Placenta praevia is a condition when placenta attaches in an abnormal position near or over the internal cervical orifice (ICO).

It can be also classified as: central total when the placenta completely covers the ICO, central partial when the ICO is only partially covered by placental tissue, marginal when placental edge is less 3 cm and lateral placenta praevia when the distance between ICO and placenta is 3-5 cm. Abnormal placental attachment is a wide spectrum disorder ranging from abnormal adher-

ence to deeply invasive placental tissue and is classified as follows: placenta accreta when chorionic villi attach to the myometrium, rather than being restricted within the decidua basalis; placenta increta when there is invasion into the myometrium; placenta percreta when chorionic villi invade the perimetrium (uterine serosa) reaching, in severe cases, adjacent organs as for as bladder or intestine. Placenta accreta is also subdivided into total, partial or focal according to the amount of placental tissue involved with different depths of placentation. The association of placenta praevia and percreta is a troublesome clinical circumstance with high risk of morbidity and mortality of both pregnant woman and newborn. The current wide variation in prevalence of placenta accreta ranging between 1 in 300 and 1 in 2000 pregnancies explains the difficulty of diagnosis, which may be done previously or during delivery¹.

We report a very rare case of central placenta praevia accreta and focal bladder percretism in a 29 years old

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Correspondence to: Vito Leanza, Department of Medical Surgical Specialties, University of Catania, Italy (E-mail: leanzavito53@gmail.com)

pregnant woman (with a history of previous vaginal delivery and four previous curettages following miscarriage) solved with caesarean section (CS), uterine ligation and further procedures allowing uterus preservation.

Case Report

A 29-year-old female patient, with an obstetrical history of one previous vaginal delivery and four curettages following miscarriage, was taken in charge by Catania S. Marco' university-hospital at 20 weeks after diagnosing Central Placenta Praevia and Accreta (CPPA) detected by means of ultrasounds (US). Patient referred having the menarche at the age of 12 years, regular menses; she used no contraceptives. Family medical history included: mother with diabetes, father with pancreatic cancer, four brothers and six sisters in apparent good health. Her medical and surgical history is unremarkable. Lifestyle was regular except for smoking (>25 cigarettes a day).

The course of current pregnancy was uneventful till 20 weeks, when US-screening detected low placental implant covering the whole ICO: Total Central Placenta Praevia (TCPP), while fetal biometry and amniotic fluid were regular; in this circumstance suspicion of placenta accreta was supposed. Further US scanner confirmed both placenta praevia with accretism. At 31 weeks Magnetic Resonance Imaging (MRI) was carried out (Fig. 2). T1- and T2-weighted images, with and without fat suppression, obtained in the three conventional planes showed: uterine bulging, placenta covering all ICO, intra-placental abnormal vascularity, focal interruptions of myometrial border particularly on the bladder trespassed by placental tissue. Final diagnosis of focal placenta praevia accreta (PPA) with addition of Focal Bladder Percretism (FBP) was done. Intramuscular betamethasone 12 mg with 24 hours interval was administered twice in order to improve foetal lung maturity. After alerting multidisciplinary team (neonatologist, urologist, interventional

radiologist and general surgeon) and having blood units available, a Caesarean Section (CS) at 34 weeks was planned, when by means of US a detachment area with bleeding was observed. An adequate informed consent was completed, where the pregnant woman and her husband accepted the risk of hysterectomy and blood transfusions. The skin incision was carried out with transversal suprapubic laparotomy according to Pfannestiel. It was done in an adequate size to give sufficient access. The incision was made transversely in the maternal abdomen approximately 2-3 cm above the symphysis pubis and was curvilinear, with the lateral apices of the incision smiling up toward the anterior superior iliac spines. This incision was performed sharply to the level of the anterior rectus fascia which was then opened with fingers in the midline to expose the belly of the rectus muscle on either side of the midline. At this time, the incision in the anterior rectus fascia was extended laterally using Mayo scissors; attention to haemostasis was paid to minimize the risk of hematoma formation. After the fascia was incised, the anterior rectus fascia was dissected from the underlying rectus muscles in both the cephalic and caudal direction by a combination of blunt and sharp dissection. During this dissection, care was taken to identify and electro coagulate the perforating vessels between the rectus muscles and the anterior fascia. Once the sheath had been mobilized the peritoneum was exposed staying in the midline. Then the entry point through the peritoneum was made high in the operative field to avoid injury to the maternal bladder. Once the peritoneal cavity was entered and a check was made to exclude or divide adhesions, the peritoneal incision was extended using scissors, to maximize surgical exposure, with care being taken to avoid any damage. To prevent entering the uterus at the lower segment where hypervascularization had been observed with preoperative ecodoppler, a transversal corporal incision of womb was performed. Due to the foetus extraction manoeuvres, most of the placenta was detached, excepting for the iuxta-vesical site where percretism was established (Fig. 2). A



Fig. 1: Left: picture of pregnant woman. Centre: MRI coronal scan. Right: didactic explanation of bladder invasion

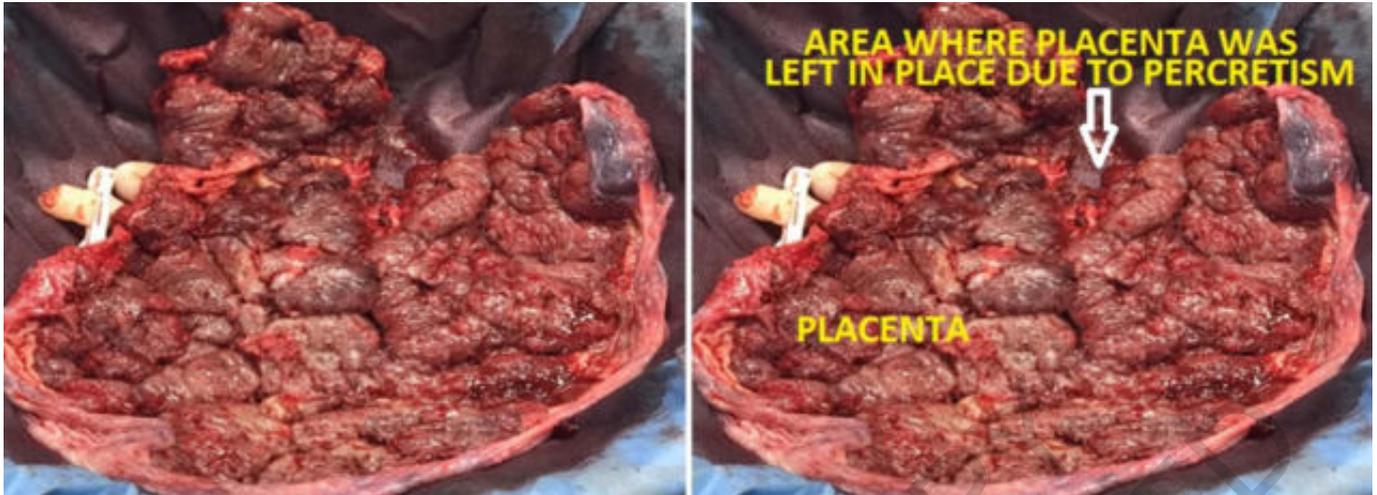


Fig. 2: Left: Placenta. Right: Didactic explanation.

vital female newborn weighing gr 2,020 was extracted and consigned to the neonatologist. Given the bleeding of the placental bed, a strong packed intrauterine tamponage was done, followed by ligation of the uterine artery bilaterally. After removal of the endo-uterine gauze, an acceptable haemostasis was obtained. Further large gauze compressing the uterine cavity was placed with the end protruding into the vaginal canal. The uterine incision was sutured in a double layer and an accurate haemostasis was done. Preoperative haemoglobin value was 12 (g/dL), and subsequently 8 (g/dL), 7.9 (g/dL), 7.6 (g/dL), 7.6 (g/dL), 7.6 (g/dL), 8.3 (g/dL) during the first, second, third, fourth, fifth, sixth days of post-operative course, respectively. Removal of intrauterine gauze after 24 hours followed surgical procedure. No transfusion was done during hospital stay. After six days, puerpera was discharged in good condition. A four-fold weekly follow up was performed without pathological findings. Following the neonatological care of the first few days, the baby's health state was satisfactory as well.

Discussion

This case report offer to consider the following points:

- Severity of disease;
- Antenatal diagnosis;
- Delivery timing;
- Informed consent;
- Surgical choice;
- Intra-operative strategies;
- Post-operative follow up.

Regarding severity of disease, obstetric haemorrhage due to placenta accreta syndrome is one of the important reasons of maternal mortality and foetal morbidity, especially when placenta praevia is associated. Guide lines

have to be considered and pathology must be faced by expertise obstetricians ².

Corticosteroid therapy (betamethasone 12mg twice) is recommended between 34+0 and 35+6 weeks of gestation for pregnant women with a low-lying placenta or placenta praevia and is appropriate prior to 34+0 weeks of gestation because of high risk of preterm birth ¹. Antenatal diagnosis of placenta praevia and accreta is crucial in planning its management and has been shown to reduce maternal and fetal complication. Previous caesarean deliveries and several curettages ³ are risk factor for placenta praevia and accreta. Even if US are quite efficient for diagnosing PPA and CPP, MRI may be used to complement ultrasound imaging in order to assess the depth of invasion and myometrial involvement, especially when another organ as the bladder is affected. Delivery timing should be considered for pregnant women presenting with placenta praevia or a low-lying placenta and a history of vaginal bleeding or other associated factors among 34+0 to 36+6 weeks of gestation, although any other gestational period may be appropriate in the presence imminent risk. Planned is more successful than emergency surgery. Prior to delivery, for filling informed consent, all women with CPPA and their partners should have a discussion regarding delivery. The choice of anaesthetic technique for caesarean section for women with PPA and CPP should be made by the anaesthetist conducting the major procedure in consultation with the woman prior to face surgery. Real jeopardy for blood transfusion, hysterectomy and other sequelae should be clearly written and documented. There is limited evidence to ensure uterus preserving surgery in PPA end CPP; anyway, when uterus is preserved, the risk of secondary hysterectomy is rare but not absent. Surgical choice is fundamental. It is evident that the preservation of uterus gives many advantages regarding fertility ⁴⁻⁶. Surgical option depends on the position of the placen-

ta, on the depth of invasion, on the visual condition of the uterus at the time of surgery and the presenting clinical symptoms (bleeding or no bleeding) ⁷. Hysterectomy is the most common procedure for the control of obstetric haemorrhage. Peripartum hysterectomy is generally performed in two scenarios, either to control massive bleeding, most often encountered for uterine atony, or for many cases of placenta accreta that was diagnosed antenatally. When peripartum hysterectomy is performed emergently, the rapid mobilization of the surgical team is essential. Preoperative readiness through standardised protocols facilitates improved outcomes for emergency cases. When emergent peri-partum hysterectomy is required, it is essential to have trained operating room staff and proper equipment and instrumentation available. Given that these procedures are challenging, it is helpful to have an instrument tray for major gynaecological surgery, as well as a self-retaining retractor. When an unexpected haemorrhage is encountered this information should be rapidly communicated to the anaesthesiology team, as well as the blood bank to ensure the availability of appropriate blood products ⁸. Preservation of uterus is also possible for CPPA as demonstrated in a cohort studies. A multidisciplinary surgical approach is important. Intra-operative strategies as bilateral ligations of the anterior division of the iliac arteries before removing the placenta, was shown to be successful in controlling the bleeding and preserving the woman's uterus in around 90% of the cases, with 14% of bladder involvement ^{9,10}. Uterus preserving surgery may be appropriate when the extent of the placenta accreta is limited in depth and surface area, and the entire placental implantation area is accessible and visualised (i.e. completely anterior, fundal or posterior without deep pelvic invasion); partial myometrial resection is contemplated as well ¹.

Uterine ligation is a good procedure to reduce haemorrhage as well. Besides there has now been a shift towards conservative treatment of placenta accreta, involving uterine and placental conservation, with the aid of interventional radiology by means of insertion of occluding balloons into appropriate vessels ¹¹. Post-operative follow up is different depending on the different modality of surgery: primary hysterectomy, secondary hysterectomy, preservation of uterus (leaving in situ or removing placenta). When placenta gets separated after foetal extraction the main risk is intra-operative and hysterectomy is avoided in rare cases after hypogastric or uterine ligation and compression of uterine cavity by means of balloon or large gauzes. When placenta remains in situ, the jeopardy of secondary hysterectomy has not to be underestimated. Regarding newborn, when other foetal diseases ¹² are not associated and corticosteroid administration has been done, prognosis is usually favourable, when delivery timing is planned starting from the thirty-fourth week of pregnancy.

Conclusions

September 2018 Green-top Guide lines for placenta previa and Placenta Accreta suggest the following six tips ¹:

- Consultant obstetrician planning and directly supervising delivery;
- Consultant anaesthetist planning and directly supervising anaesthesia at delivery;
- Blood and blood products available;
- Multidisciplinary involvement in preoperative planning;
- Discussion and consent, including possible interventions (such as hysterectomy, leaving the placenta in situ, cell salvage and interventional radiology);
- Local availability of a level 2 critical care bed.

Our case is very interesting for severity of two association placenta PPP and CPP. Even in severe obstetric gynaecological cases ¹³⁻¹⁷, when clinic conditions permit, conservative surgery can be attempted, but we must be ready for further and demolitive procedures (hysterectomy) when high risk for the mother arises. A planned operation with corporal transversal uterine incision, bilateral uterine ligation, packed tamponage, removal of placental tissue separated during foetal extraction and leaving a portion of placenta only in the place of percreta, may allow conservative intervention ending in good results for both young mother and foetus ¹⁸⁻²⁶.

Riassunto

La placenta previa è una condizione in cui la placenta viene inserita in una posizione anormale vicino o sopra l'orifizio cervicale interno (ICO). L'attaccamento placentare anormale (placenta accreta, increta, percreta) è un disturbo ad ampio spettro che va dall'aderenza anormale al tessuto placentare profondamente invasivo. Segnaliamo un caso molto raro di placenta centrale praevia accreta e percreta focale nella vescica in una donna incinta di 29 anni con una storia ostetrica di un precedente parto vaginale e quattro raschiamenti dopo aborto spontaneo. È stata presa in carico dall'Università-Ospedale di Catania S. Marco a 20 settimane con diagnosi di Placenta Centrale Praevia e Accreta (CPPA) rilevata mediante ecografia (US). A 31 settimane la risonanza magnetica (MRI) ha confermato la CPPA con percreta focale nella vescica. Dopo aver allertato il team multidisciplinare e ottenuto le unità di sangue disponibili, è stato programmato un taglio cesareo (CS) a 34 settimane, quando tramite US è stata osservata un'area di distacco con sanguinamento. È stato completato un adeguato consenso informato, in cui la donna incinta e suo marito hanno accettato il rischio di una possibile isterectomia e trasfusioni di sangue. La laparotomia secondo Pfannestiel con incisione uterina corporale trasversale, legatura uterina bilaterale, tamponamen-

to a compressione, rimozione del tessuto placentare separato durante l'estrazione fetale e lasciando una porzione di placenta solo al posto del percreta, ha permesso un intervento conservativo (preservazione dell'utero) con buoni risultati per entrambi madre e feto.

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