Comprehensive Management of Placenta Increta and Percreta: A Case Report

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DOI: 10.29322/IJSRP.14.07.2024.p15224

Paper Received Date: 25th July 2024
Paper Acceptance Date: 25th August 2024
Paper Publication Date: 30th August 2024

Abstract- Introduction - Placenta increta and percreta are severe forms of abnormal placental attachment that pose significant risks to maternal and fetal health. Case Report - This case report details the clinical presentation, diagnostic findings, surgical management, and postoperative care of a 26-year-old woman at 32 weeks of gestation with a history of previous cesarean section, presenting with abdominal pain and deteriorating vitals.

Discussion - Comprehensive management led to successful outcomes for both mother and child. Conclusion - The aim of this report is to highlight the critical aspects of diagnosis, multidisciplinary approach, and meticulous postoperative care required to manage such high-risk obstetric emergencies effectively.

I. Introduction

Placenta increta and percreta represent two of the most severe forms of placental attachment disorders, collectively known as morbidly adherent placenta (MAP). These conditions occur when the placenta invades the myometrium (placenta increta) or penetrates through the uterine wall, potentially affecting surrounding organs (placenta percreta). Such abnormal invasions are strongly associated with previous uterine surgeries, notably cesarean sections, which disrupt the normal uterine lining and facilitate abnormal placental attachment.

These conditions significantly increase the risk of severe hemorrhage, uterine rupture, and other complications that can threaten the lives of both mother and fetus. Early diagnosis and a well-coordinated multidisciplinary management approach are essential to mitigate these risks. This report details the comprehensive management of a 26-year-old woman at 32 weeks of gestation, focusing on the challenges and strategies employed to achieve a successful outcome.

Case Report

A 26-year-old gravida 2 woman at 32 weeks and 9 days of gestation presented to the emergency department with acute abdominal pain and deteriorating vital signs. Her medical history included a previous cesarean section performed three years prior. She had not received consistent prenatal care, and her pregnancy had not been regularly monitored.

On admission, the patient exhibited signs of acute distress, including tachycardia, hypotension, and severe abdominal pain. Initial physical examination and ultrasonography raised suspicions of abnormal placental attachment and a potential uterine rupture. The presence of a live fetus was confirmed, but the exact nature of the placental pathology remained unclear.

Given the critical nature of her condition and the rapid deterioration of her vitals, the decision was made to proceed with an emergency cesarean section. The patient and her family were counseled regarding the potential for severe complications, including the need for a possible hysterectomy to control hemorrhage and ensure maternal safety.

II. Diagnostic Findings

Diagnostic imaging, particularly ultrasonography, played a crucial role in the assessment of the patient's condition. Ultrasonography revealed the presence of placental tissue within the uterine cavity, with a high suspicion of placenta increta or percreta. The imaging findings suggested an abnormal invasion of the placenta into the myometrium and possibly beyond, but the exact extent of invasion could not be conclusively determined preoperatively.

The differential diagnosis included uterine rupture, given the patient's acute presentation and history of previous cesarean section. However, ultrasonography excluded the immediate presence of uterine rupture, directing the clinical suspicion towards a morbidly adherent placenta. The deteriorating clinical status of the patient necessitated urgent surgical intervention, with a plan for possible cesarean hysterectomy if the placental invasion was confirmed intraoperatively.

Surgical Management

An emergency cesarean section was performed under general anesthesia. Intraoperatively, the surgical team encountered extensive placental tissue completely engulfing the uterine wall, consistent with a diagnosis of placenta percreta. The placental vessels were noted to be bleeding actively, contributing to a significant intra-abdominal hemorrhage and gross hemoperitoneum.

Given the extensive nature of placental invasion and the ongoing hemorrhage, a cesarean hysterectomy was performed to control bleeding and prevent further complications. The uterine scar from the previous cesarean section was intact, which facilitated the delivery of a live neonate. The neonate, weighing 2100 grams, was immediately transferred to the Neonatal Intensive Care Unit (NICU) for further care.

The cesarean hysterectomy involved careful dissection to avoid injury to adjacent organs, such as the bladder and intestines, which are often at risk in cases of placenta percreta. The surgical team included obstetricians, a gynecologic oncologist, anesthesiologists, and a neonatologist, highlighting the importance of a multidisciplinary approach in managing such complex cases.

III. Postoperative Care

Postoperative management was intensive, focusing on stabilizing the patient and monitoring for potential complications. The patient received blood transfusions to manage the significant blood loss incurred during surgery. Intravenous fluids, antibiotics, and other supportive measures were administered to stabilize her condition.

Intensive monitoring included regular assessment of vital signs, hemoglobin levels, and signs of infection. Pain management was also a critical component of postoperative care, ensuring the patient's comfort and facilitating recovery. The patient remained in the intensive care unit (ICU) for the first 48 hours post-surgery, where she was closely monitored for any signs of ongoing bleeding, infection, or other complications.

The neonate, admitted to the NICU, required supportive care for respiratory distress and prematurity. The NICU team provided continuous monitoring, respiratory support, and nutritional support to ensure the neonate's stabilization and growth.

IV. Outcome

Both the mother and the neonate had favorable outcomes following the intensive multidisciplinary management. The mother was discharged from the ICU to a regular postpartum unit after 48 hours and subsequently discharged home after five days, with instructions for follow-up care. Her recovery was uneventful, with no significant postoperative complications observed.

The neonate remained in the NICU for three weeks, receiving care for prematurity-related issues. The neonate's condition gradually improved, and the baby was eventually discharged home in stable condition.

Follow-up care for the mother included monitoring for potential postoperative complications, such as infection or thromboembolic events. Counseling was provided regarding the implications of the hysterectomy on future fertility and health, addressing both physical and psychological aspects of her recovery. The patient was referred to a reproductive endocrinologist for further consultation on fertility preservation options.

V. Discussion

The management of placenta increta and percreta poses significant clinical challenges due to the high risk of severe hemorrhage, potential for organ damage, and the complexity of surgical intervention. This case highlights the importance of early recognition and diagnosis, which can significantly impact the management strategy and outcomes.

In this case, the lack of regular prenatal care and late presentation complicated the clinical course. Regular prenatal care, including early ultrasound assessment, is critical in identifying risk factors for abnormal placental attachment and facilitating early intervention.

The use of ultrasonography was instrumental in diagnosing the condition preoperatively, allowing for the preparation of a comprehensive surgical plan. In cases where the diagnosis is uncertain, magnetic resonance imaging (MRI) can provide additional detail regarding the extent of placental invasion and guide surgical planning.

A multidisciplinary team approach is essential in managing placenta increta and percreta. The involvement of obstetricians, anesthesiologists, gynecologic oncologists, neonatologists, and critical care specialists ensures that all aspects of care are addressed, from surgical management to postoperative recovery.

The decision to perform a cesarean hysterectomy in this case was based on the intraoperative findings and the need to control life-threatening hemorrhage. This approach is often necessary in cases of placenta percreta to prevent severe morbidity and mortality. The surgical technique must be meticulous, with careful dissection to avoid injury to surrounding organs and control bleeding.

Postoperative care is equally crucial, focusing on stabilizing the patient, managing pain, and preventing complications. Intensive monitoring and supportive care in the ICU are often required initially, followed by a gradual transition to less intensive care as the patient's condition stabilizes.

The psychological impact of a hysterectomy at a young age must not be underestimated. Counseling and support services should be provided to address the emotional and psychological aspects of the patient's recovery. This includes discussing the implications for future fertility and exploring options for fertility preservation or assisted reproductive techniques if desired.

VI. Conclusion

Placenta increta and percreta are life-threatening conditions that require prompt diagnosis, a well-coordinated

multidisciplinary approach, and meticulous surgical and postoperative management. This case report highlights the critical elements of successful management, from early recognition and diagnosis to comprehensive perioperative care and long-term follow-up.

The positive outcome for both mother and child in this case underscores the importance of preparedness, teamwork, and the application of best practices in managing high-risk obstetric emergencies. Future efforts should focus on improving prenatal care access, enhancing diagnostic capabilities, and refining surgical techniques to further improve outcomes for patients with placenta increta and percreta.

VII. Recommendations

1. Early Diagnosis and Regular Prenatal Care: Ensuring regular prenatal visits and early ultrasound screenings can help identify risk factors for abnormal placental attachment early in pregnancy. Patients with a history of cesarean section should be closely monitored for signs of placenta accreta spectrum disorders.
2. Multidisciplinary Team Approach: A coordinated effort involving various specialties, including obstetricians, anesthesiologists, neonatologists, and critical care specialists, is essential for the successful management of placenta increta and percreta. Preoperative planning and intraoperative collaboration can significantly enhance patient outcomes.
3. Advanced Diagnostic Imaging: In addition to ultrasonography, the use of MRI can provide detailed information about the extent of placental invasion and guide surgical planning. Advanced imaging techniques should be utilized in complex cases to improve diagnostic accuracy.
4. Comprehensive Surgical Planning: Preparing for potential complications, such as massive hemorrhage and organ involvement, is crucial. Surgical teams should be equipped with the necessary tools and expertise to perform cesarean hysterectomy and manage any intraoperative challenges.
5. Intensive Postoperative Care: Close monitoring in the ICU, pain management, and supportive care are critical components of postoperative recovery. Early intervention for any signs of complications can prevent further morbidity and enhance recovery.
6. Psychological Support and Counseling: Addressing the emotional and psychological impact of a hysterectomy, particularly in young patients, is vital. Providing counseling and exploring options for future fertility can help patients cope with the implications of their condition.
7. Research and Education: Ongoing research into the pathophysiology, diagnostic techniques, and management strategies for placenta accreta spectrum disorders is essential. Healthcare providers should be educated on the latest evidence-based practices to improve patient care and outcomes.

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