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Live intraligamentous pregnancy at term: Lessons learned from an unusual experience

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Abstract

An unusual case is presented, of an abdominal ectopic pregnancy, which went to term without any complication perceived by the patient. However, the case posed challenges at the time of operative delivery, when it was complicated with hemorrhage, from the morbidly adherent placenta, externally invading the uterine wall, which was ultimately found. This required a cesarean hysterectomy to be performed.

Keywords

pregnancy; obstetrics; ultrasound imaging

Introduction

Extrauterine pregnancies are a rare finding in obstetrics, occurring approximately once per 10,000 pregnancies [1,2]. Intraligamentous pregnancies are an even more rare occurrence, and are generally reported only as case reports [3,4]. Understandably, fetal mortality is extremely high in extrauterine pregnancy, estimated to be between 40-95%. Here is a case of an intraligamentous pregnancy that reached 36 weeks gestation without an associated antepartum patient complaint, and which resulted in the live birth of a healthy infant, in spite of the complicating morbidly adherent placenta, which was ultimately found.

Case Description

A 36 y/o Gravida 3 Para 2 woman was transferred from an outside hospital with a new diagnosis of placenta accreta, from ultrasound imaging that had been performed there. She established care at 32 weeks and had an obstetric ultrasound which showed a left lateral placenta previa with placentomegaly, and possible abnormal placental implantation (Figures 1, 2 & 3). She had a history of two prior cesareans, and her cesarean was scheduled and performed electively. A repeat ultrasound at 35 weeks 6 days had shown a left

lateral placenta previa with concern for accreta. The patient was transferred to our institution for delivery the following day.

Upon arrival, the patient was comfortable and without complaint. She denied contractions and reported active fetal movement. Her blood pressure was 122/62, pulse 77 beats/minute and respiratory rate 16 breaths/minute. Her hemoglobin upon arrival was 8.7 g/dL. The patient received 2 units of packed red blood cells overnight and an additional 4 units were held for surgery. The neonatology and anesthesiology teams were consulted. The Gynecologic Oncology service was also consulted for anticipated assistance in performing the hysterectomy.

At surgery, upon entering the abdominal cavity, the anterior uterine wall was notably thin and semi-transparent. The active fetus could be clearly visualized through this thin wall. A vertical incision was carefully made and the infant delivered. Upon removal of the infant, the anatomy became clearer. The incision made for delivery was made through the right anterior broad ligament. The uterus had been levo-rotated and posterior to the fetus and the placenta was adherent to the posterior leaf of the right broad ligament.

Given the suspicion for uterine invasion, the placenta was left in place and hysterectomy performed. The left adnexa was inspected and not found to be involved, so it was not removed. Massive transfusion protocol was initiated due to anticipated blood loss. The right ovary could not be immediately identified. After the right ureter was identified, the right adnexa was removed at the level of the infundibulo-pelvic ligament. After hysterectomy was completed, additional bleeding was noted from the pelvic side wall and was controlled with bilateral hypogastric artery ligation. The resultant surgical extirpation is pictured in Figure 4. Estimated blood loss was 3,500ml. The patient was admitted to the ICU overnight with extubation the following morning. She was transferred to the postpartum unit on postoperative day one. She recovered well and was discharged home on postoperative day four. The infant was admitted to the NICU, moved to postpartum on postoperative day two and discharged home with mother.

Pathology revealed an enlarged placenta attached to the external aspect of the uterus in the region of the right adnexa, without communication into the endometrial cavity. Histologic sections of the placenta showed attachment to bands of smooth muscle consistent with the broad ligament.

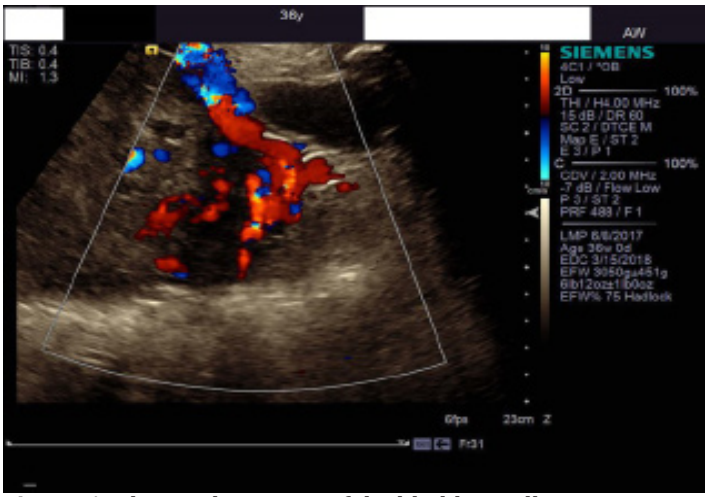

Figure 1: Placental invasion of the bladder wall

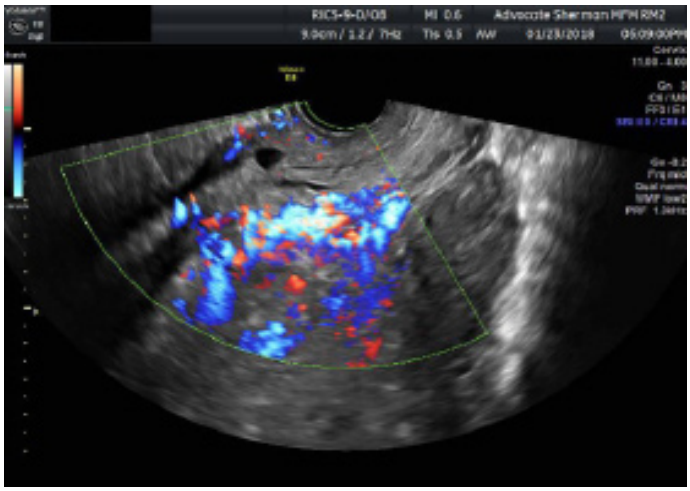

Figure 2: Placental insertion posteriorly to the cervix and endocervical canal

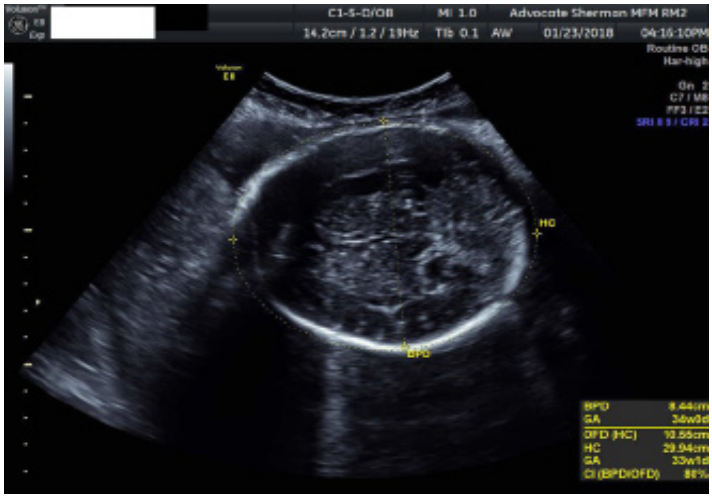

Figure 3: Fetal head under the abdominal wall without cover by myometrial mantel.

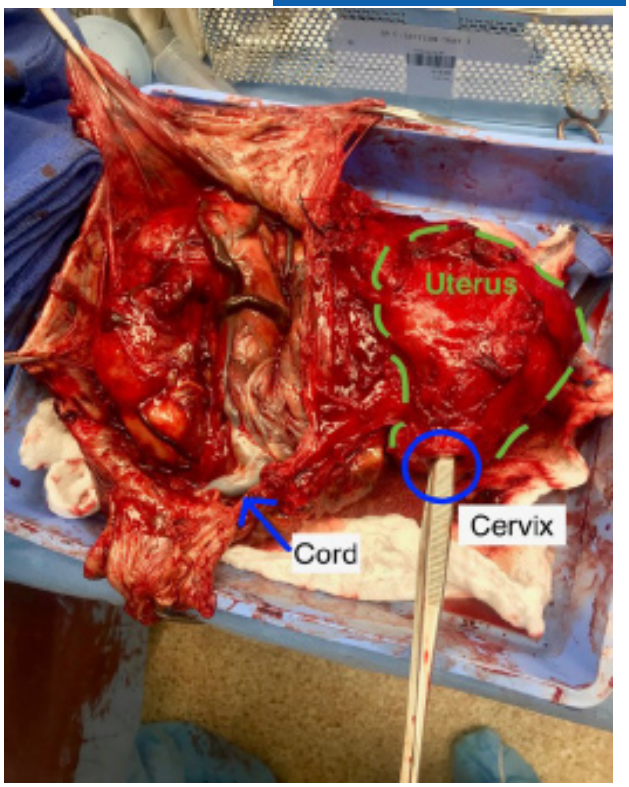

Figure 4: Pictorial display of resected tissue

Discussion

Intraligamentous pregnancies are a rare form of abdominal pregnancy and most often identified at the time of surgery. They arise when the conceptus implants in the tube and the trophoblasts penetrate through the tube into the mesosalpinx. Another etiology is the migration of the conceptus through a defect in the uterine wall – either an old surgical scar or fistula. A history of pelvic surgery, such as a myomectomy, tubal ligation or surgical dilation and curettage, would contribute to this risk. However, in our patient, her only risk factor was a history of two cesarean sections, a relatively common occurrence in the United States.

In this case, suspicion for of a placenta accreta resulted in performing an elective repeat cesarean. A multidisciplinary team had been organized, in preparation for a possibly complex cesarean hysterectomy. Broad ligament pregnancies are most often identified only at the time of surgery (5) and in this case, even the diagnosis during surgery was not obvious until after the delivery of the infant. The hysterectomy was completed without major complication. However, the outcome could have been different, had the subspecialty consultants not been immediately available. The need for the availability of ultrasonography for the diagnosis of morbidly adherent placenta, when it may be clinically considered, should additionally be recognized. It is an important reminder to providers that even something as routine as a third repeat cesarean can pose significant and unanticipated complications.

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