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Review Article

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EMERGENCY CAESAREAN SECTION FOR HEMORRHAGIC TOTALLY OVERLYING PLACENTA PREVIA IN A PATIENT WITH A BICHORIONIC GEMELLAR PREGNANCY ON A SCARRED UTERUS AND ON EXAMINATION OF THE DELIVERY A RETROPLACENTAL HEMATOMA IN BOTH PLACENTAS.

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ABSTRACT

We describe the indication of emergengy cesarean section for totally overlying hemorrhagic placenta previa in a patient with a twin bichorionic biamniotic pregnancy of 34 weeks of amenorrhea on a scarred uterus hospitalized for a threat of premature delivery with a retroplacental hematoma in both placentas on delivery examination.

KEYWORDS: totally overlying hemorrhagic placenta previa; retroplacental hematoma; scarred uterus; twin pregnancy; threat of premature delivery.

INTRODUCTION

The etiologies of hemorrhage in the third trimester of pregnancy are multiple, dominated by placenta previa, retroplacental hematoma, and uterine rupture which can occur in a healthy or scarred uterus.

The association of the two most frequent etiologies of hemorrhage in the third trimester of pregnancy, namely,totally overlying hemorrhagic placenta previa and retroplacental hematoma, is rare and represents an unprecedented case, all the more so because in our case it was a twin bichorionic biamniotic pregnancy on scarred uterus and the retroplacental hematoma was present in both placentas.

CASE REPORT

Patient 23 years old, history of scarred uterus, gravida 3, para 3, the first pregnancy ended with a caesarean section 5 years ago for macrosomia in labour, the newborn was live male, birth weight 4100 grams with good psychomotor development, the second pregnancy ended with a cured abortion at 3 months one year ago, the third pregnancy is the current pregnancy, it is a twin pregnancy with an estimated gestational age of 34 weeks of amenorrhea according to the date of the last menstruation.

The patient was followed by a general practitioner in the private sector, and referred from the provincial hospital of Khemisset, 100 km from our maternity hospital, for a totally overlying placenta previa with threat of premature delivery in a twin pregnancy.

The clinical examination on admission found a normotensive, apyretic patient, fetal heart sounds were present in both foci, there were no uterine contractions. The vaginal touch found a closed cervix admitting the fingertip, the membranes were intact, there was no genital bleeding.

The infectious anamnesis is negative, the research of proteinuria in the urine is negative.

Obstetrical ultrasound showed an evolving twin pregnancy with positive cardiac activity in both twins, totally overlying biamniotic bichorial placenta previa, the first twin is in cephalic presentation and the second twin is in transverse presentation, fetal measurements are consistent with gestational age with an estimated fetal weight of 1800 grams for the first twin and 2150 grams for the second twin.

Endovaginal ultrasound showed a cervical length of 2.75 cm.

The patient is hospitalized in our formation, she benefited from a tocolysis by loxen 20 mg (nicardipine) one tablet three times a day and a fetal pulmonary maturation by celestene (betamethasone) with realization of a complete biological assessment which came back normal except for an anemia quantified at 10,5 g/dl.

Fetal heart rate recording of both twins is normal, both tracings are reactive oscillatory.

After 24 hours of hospitalization with strict rest and armed surveillance, the patient presented a genital hemorrhage made of red blood of medium abundance coming from the uterine cavity with a slight abdominal contracture. It was decided to make an emergency cesarean section for totally overlying hemorrhagic placenta previa on twin pregnancy in a patient with a scarred uterus, which allowed.

- cephalic extraction of the first live male twin, birth weight 1727 grams, apgar 2/3/4, hematic amniotic fluid.
-podalic extraction of the second live female twin, birth weight 2175 grams, apgar 7/8/8, clear amniotic fluid.

Examination of the delivery found a biamniotic bichorial placenta with a total retroplacental hematoma of the placenta of the first twin and a retroplacental hematoma of one third of the placenta of the second twin.

Both placentas are sent to anatomopathological study for histological confirmation.

anatomopathology confirmed the retroplacental hematoma of both placentas, it shows hypotrophy of both placentas in relation to the gestational age, old infarct site with signs of fetomaternal vascular malperfusion.

The first twin is hospitalized in neonatal intensive care. The postoperative course was unremarkable.

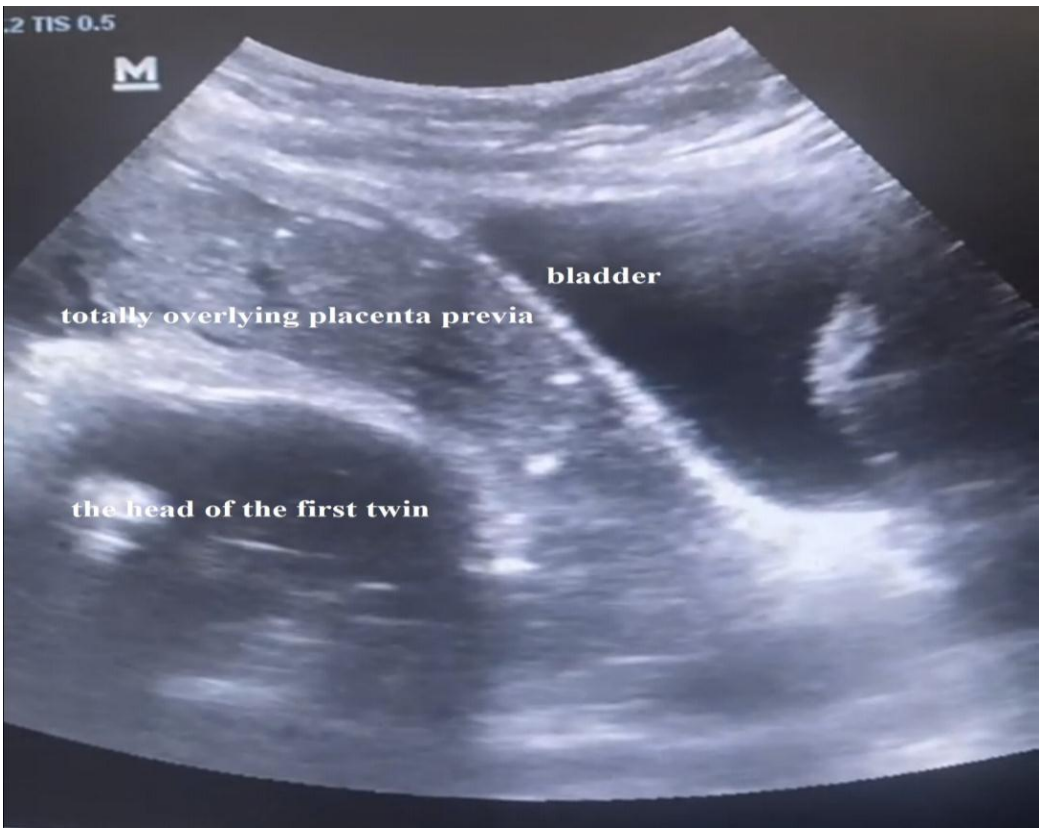

Figure 1: Totally overlying placenta previa on endovaginal ultrasound, first twin in cephalic presentation.

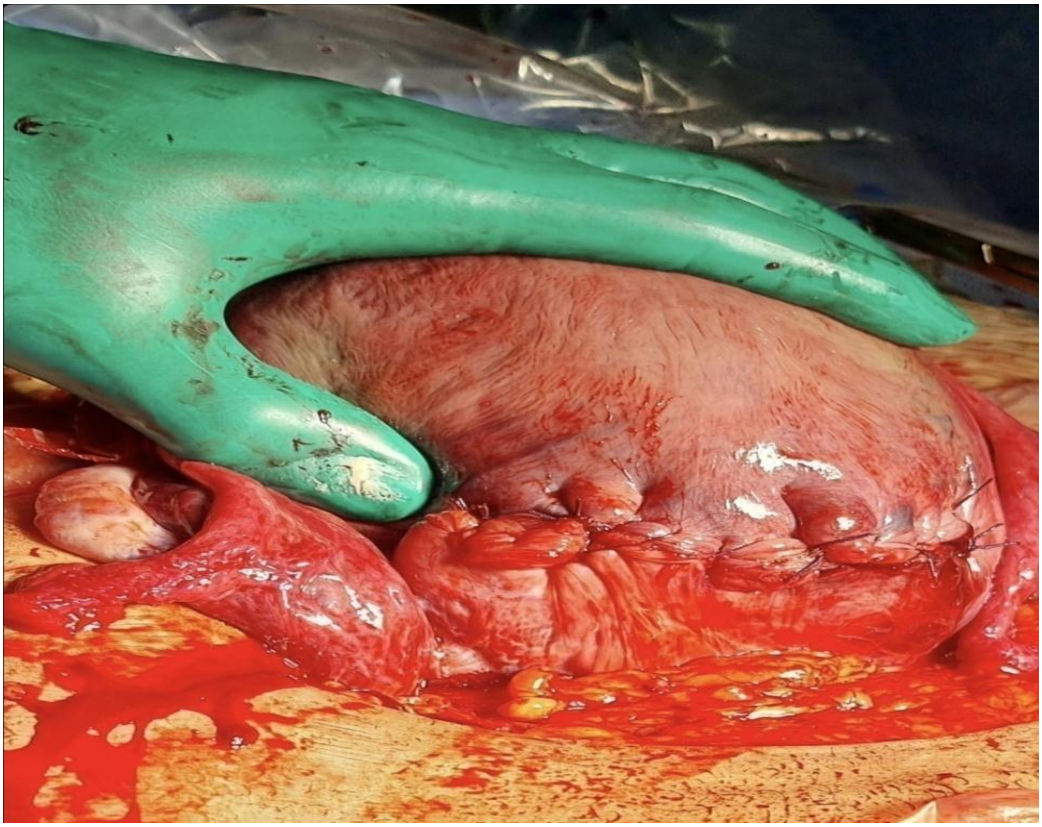

Figure 2: Hemostasis assured with very good security globe after hysterorraphy.

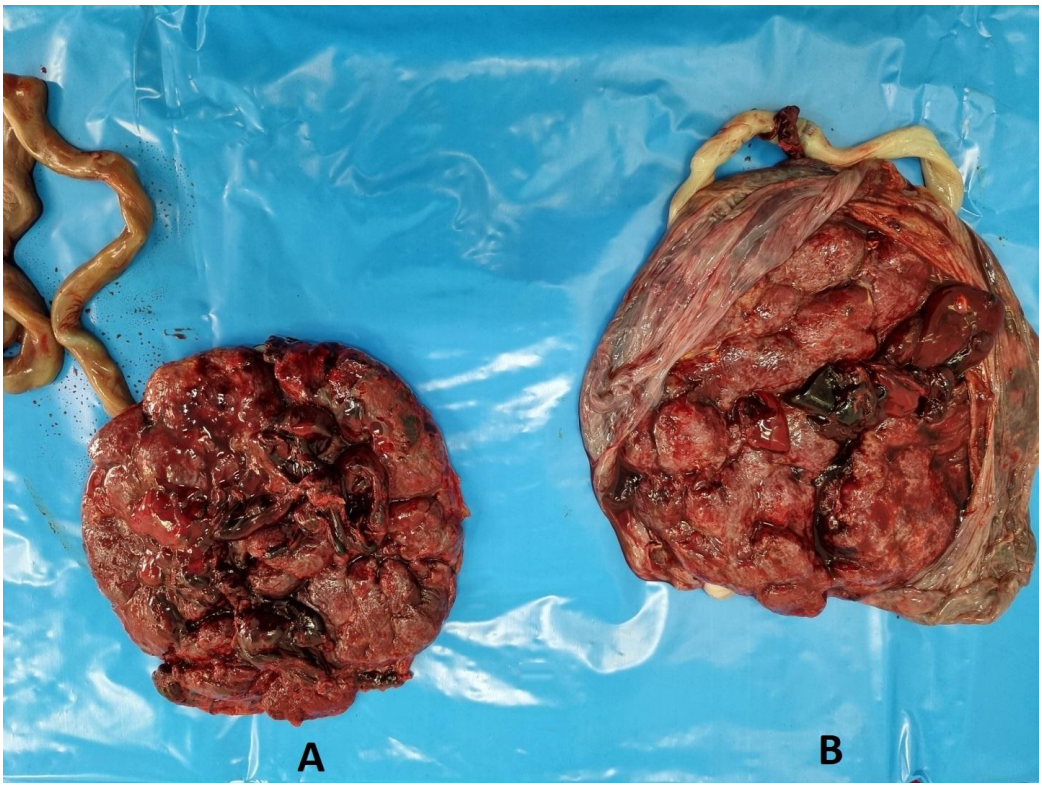

Figure 3: Twin bichorial pregnancy with retroplacental hematoma in both placentas. Total retroplacental hematoma in the placenta of the first twin (A). Retroplacental hematoma of one third in the placenta of the second twin (B).

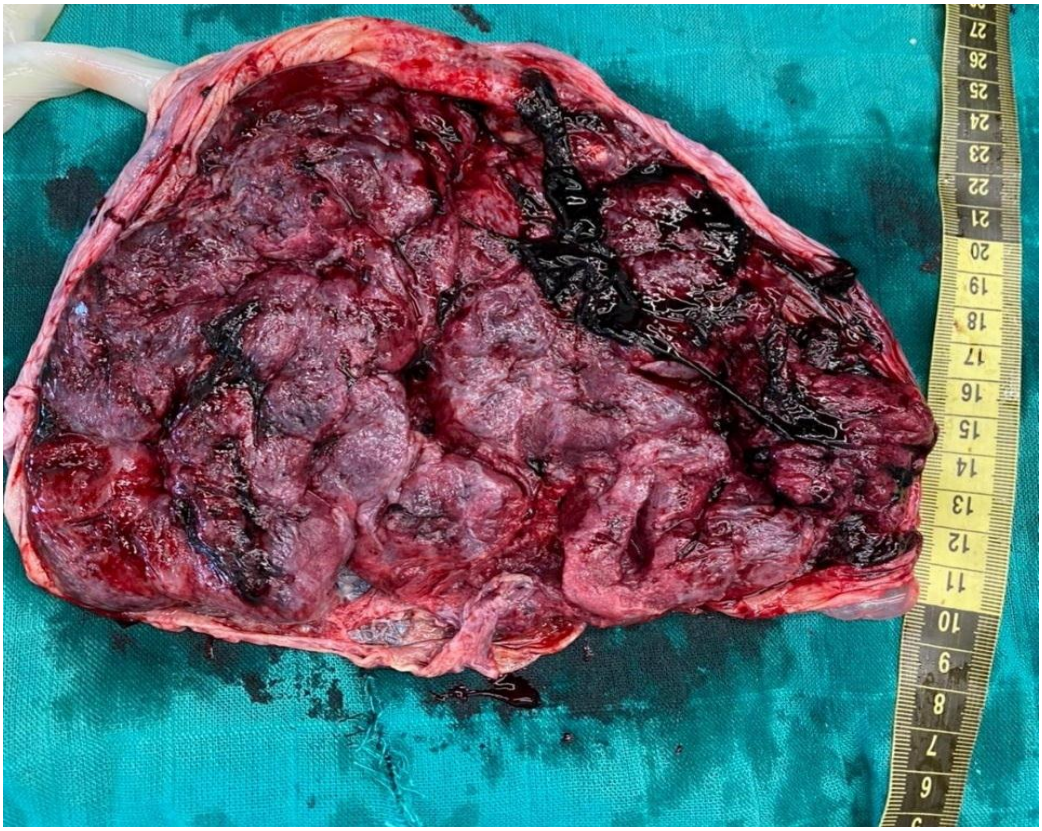

Figure 4: Appearance of the placenta of the second twin in the fresh state (basal plate) during the anatomopathological study.

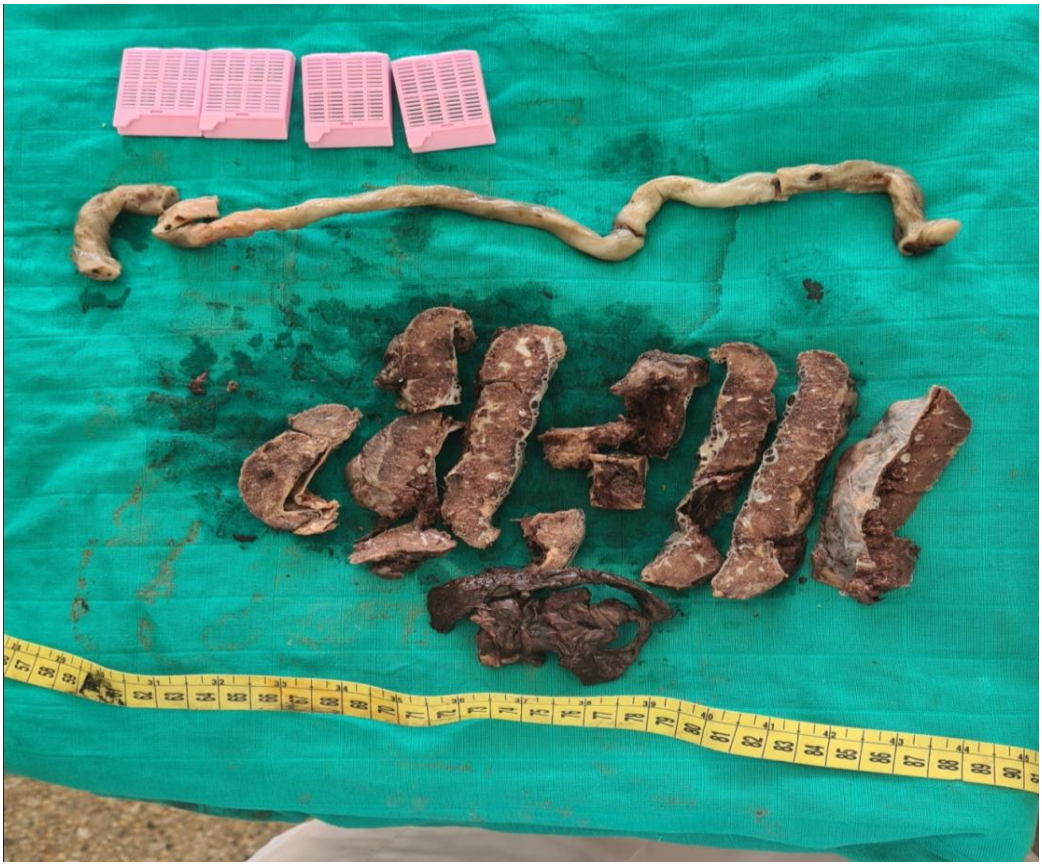

Figure 5: Macroscopic aspect after cutting of the placenta of the first twin during the anatomopathological study.

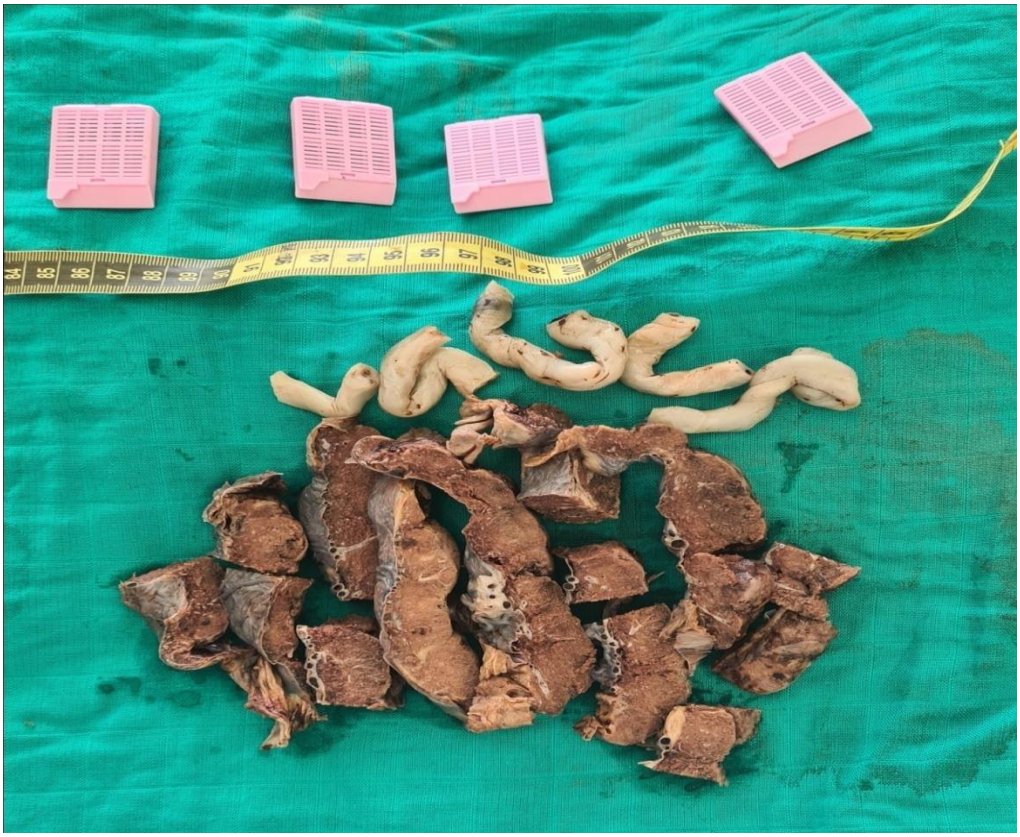

Figure 6: Macroscopic aspect after cutting of the placenta of the second twin during the anatomopathological study.

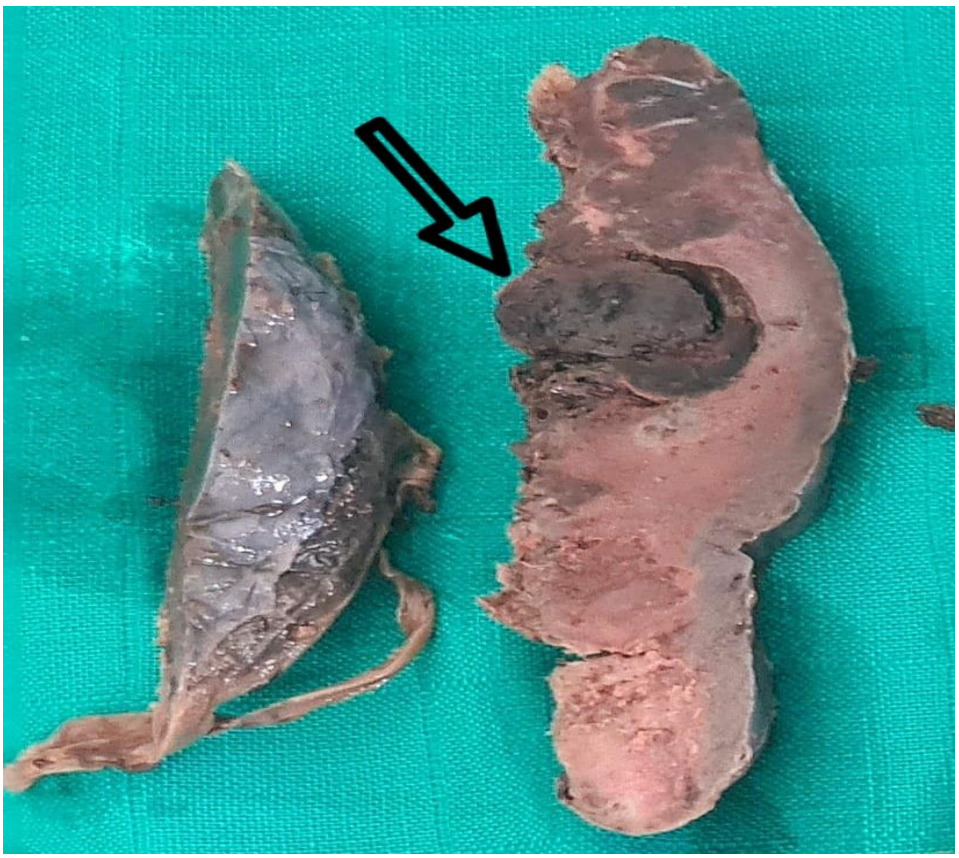

Figure 7: Macroscopic image of the retroplacental hematoma.

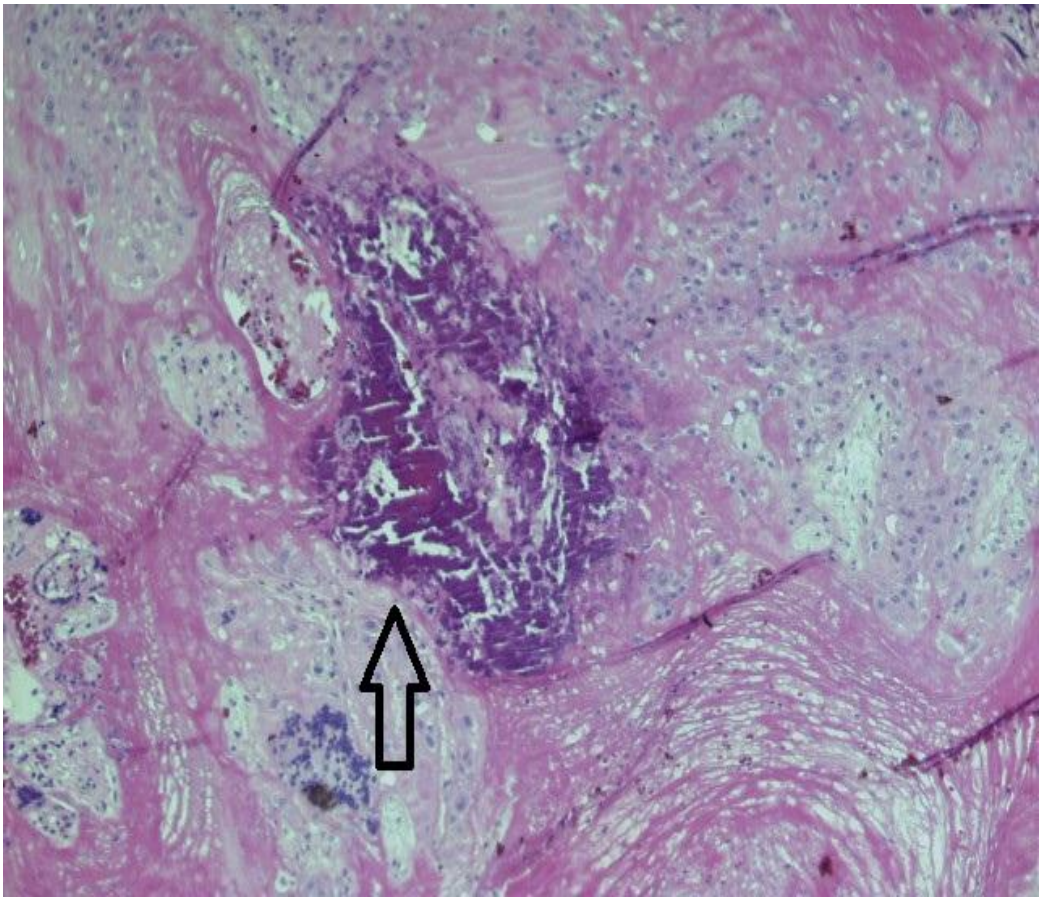

Figure 8: Calcifications with mummified villi.

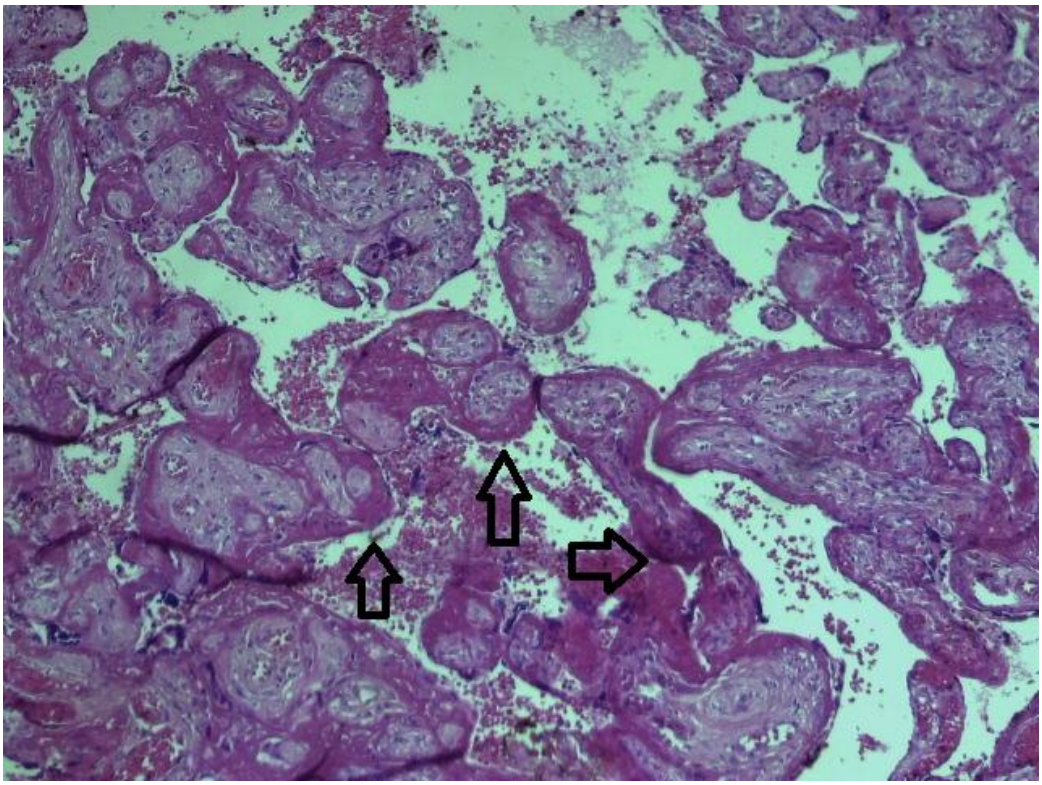

Figure 9: Perivillous fibrin deposit.

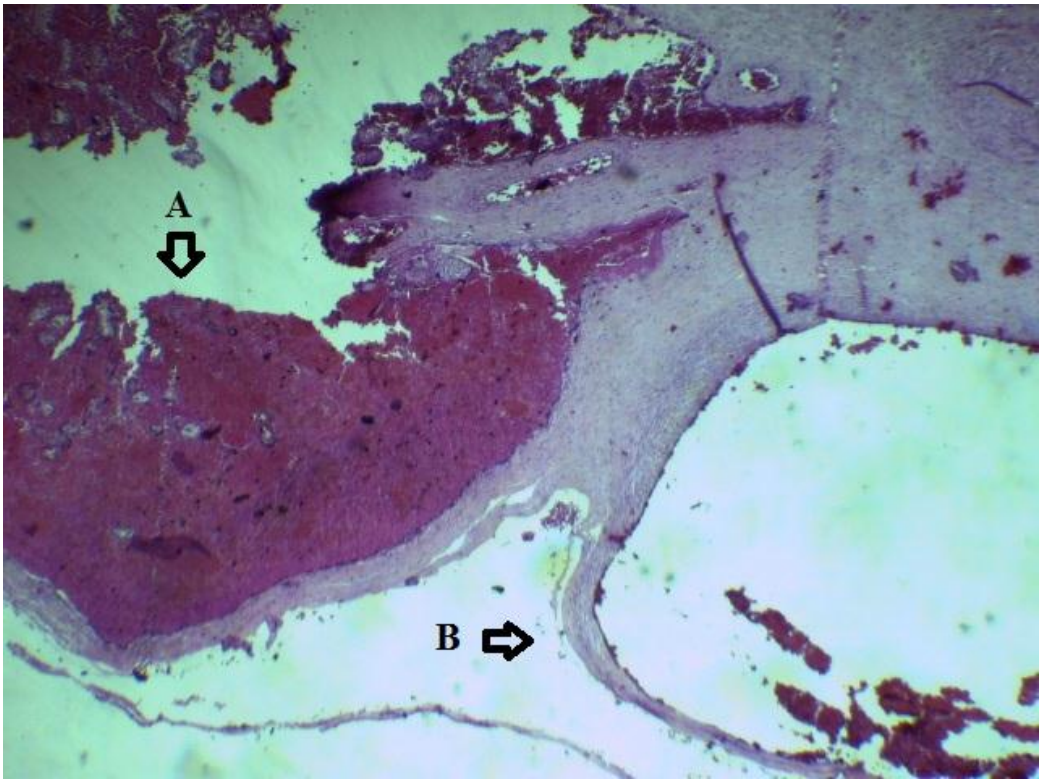

Figure 10: Vascular thrombosis (A) with ectasia of the chorioallantoic vessels (B).

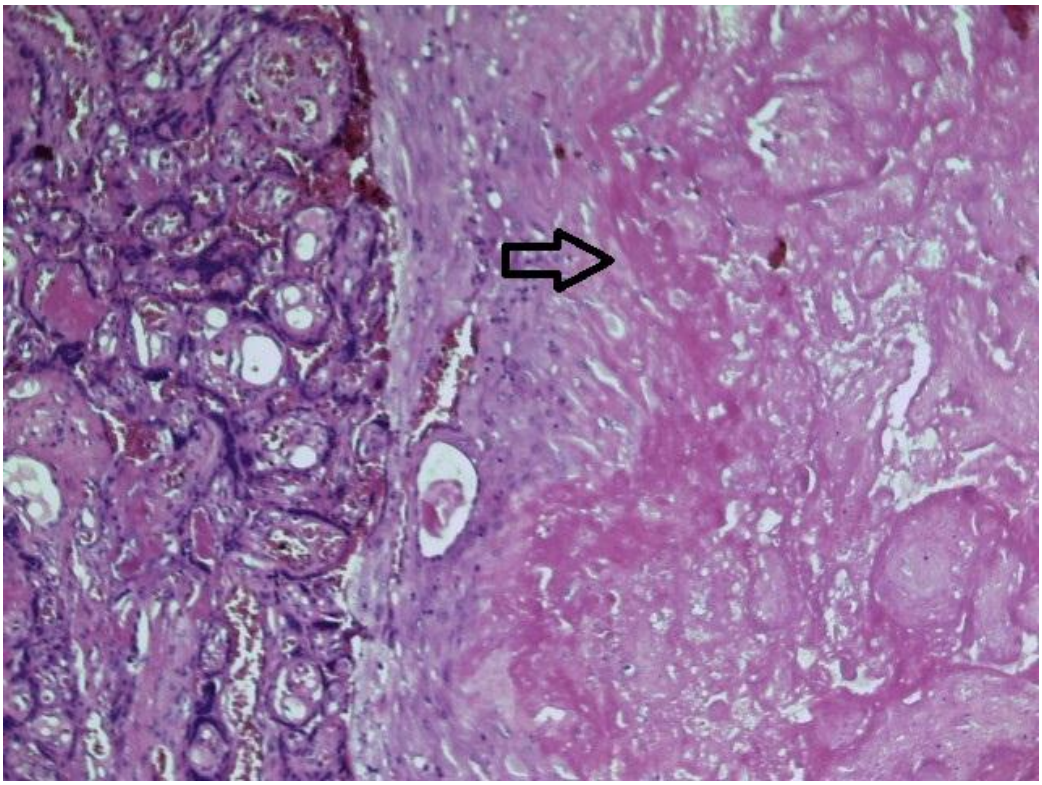

Figure 11: Fibrino-cruciate material showing an old retroplacental hematoma of the first twin's placenta.

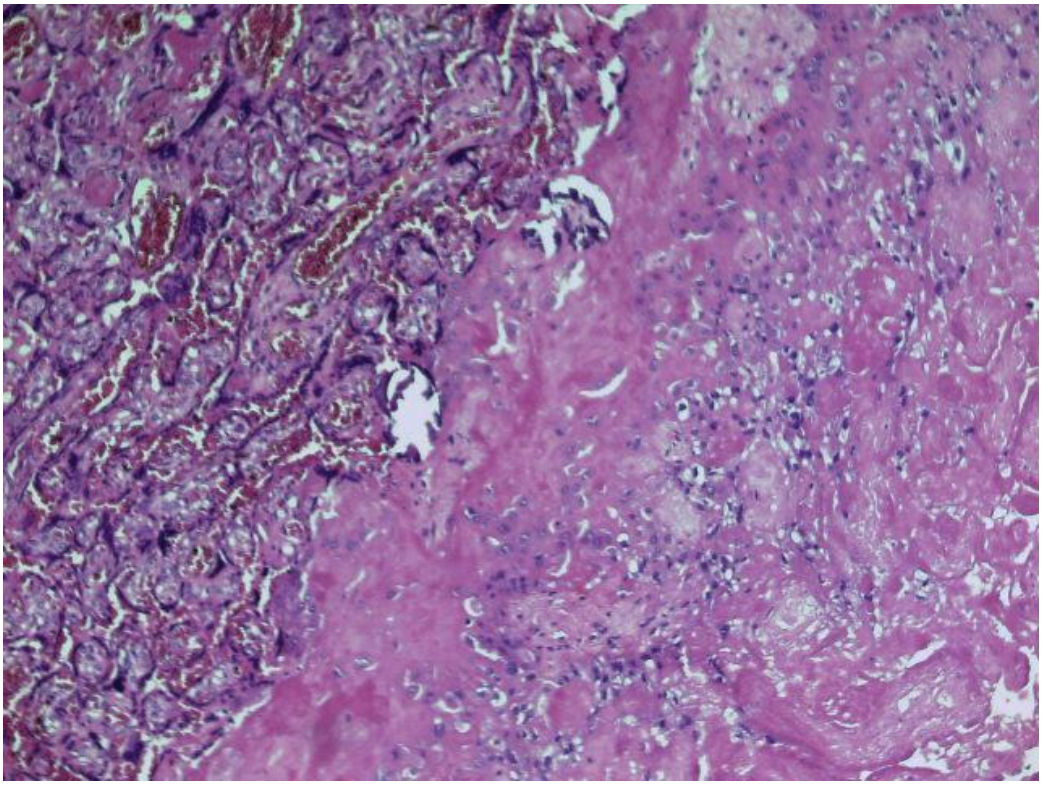

Figure 12: Old retroplacental hematoma of the placenta of the first twin.

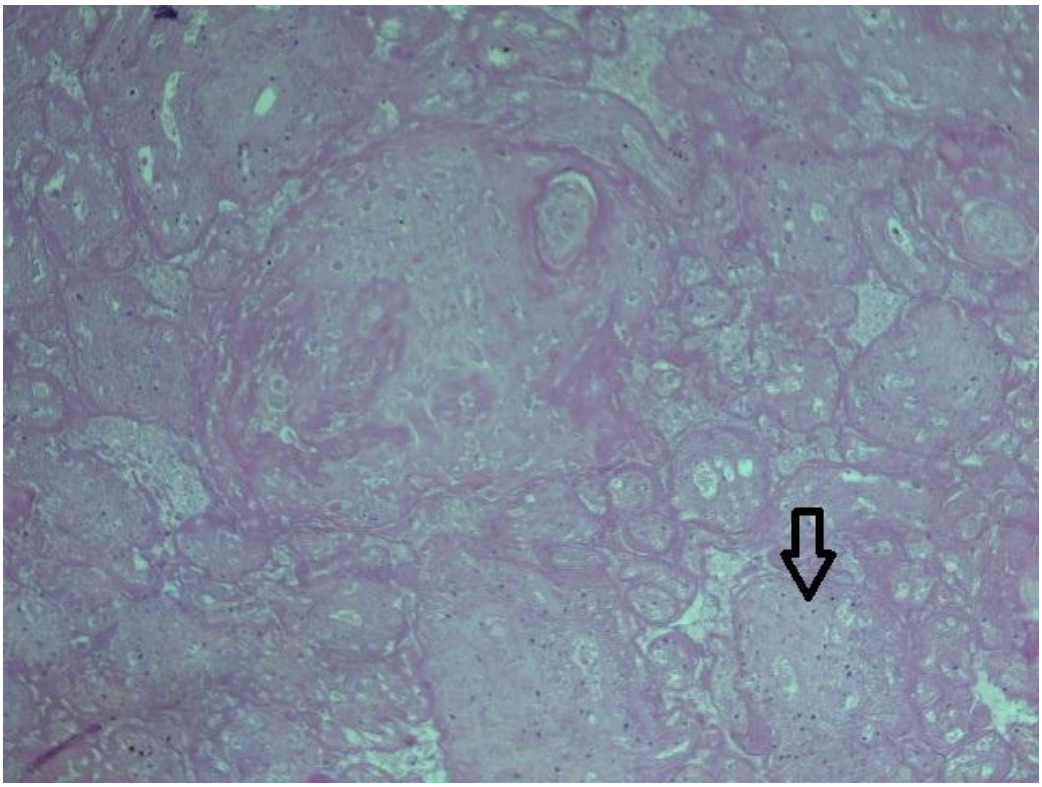

Figure 13: Old infarction.

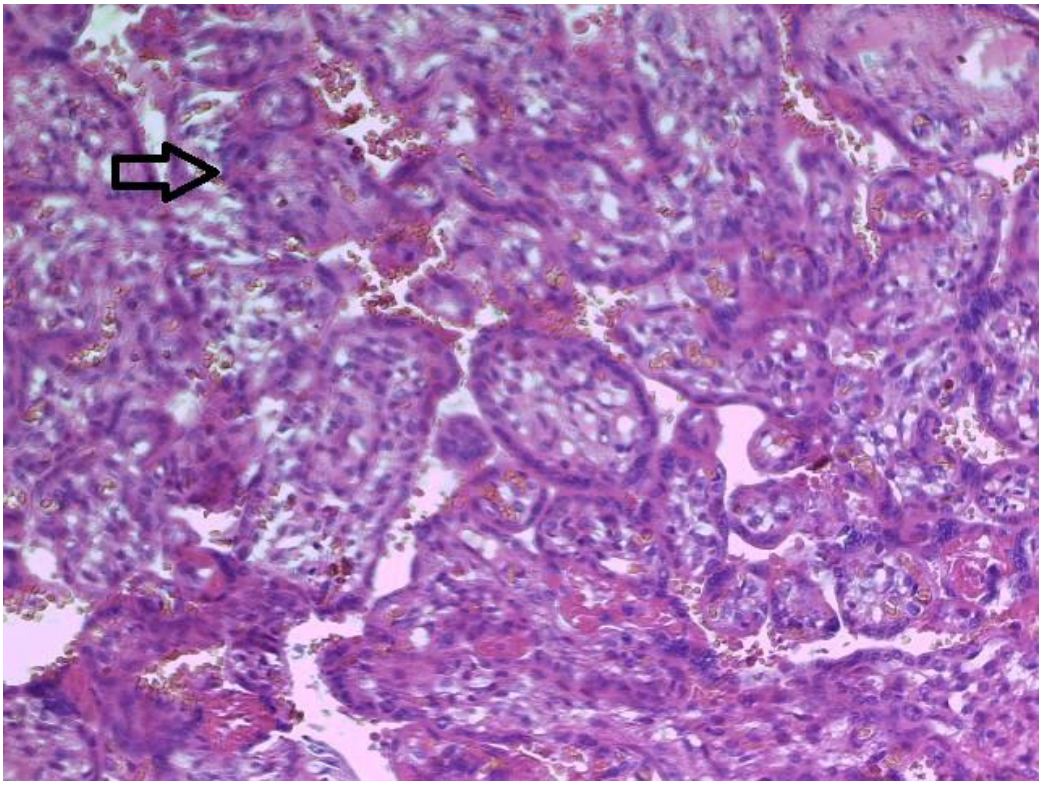

Figure 14: Narrowing of the intervillous chamber indicating acute placental ischemia.

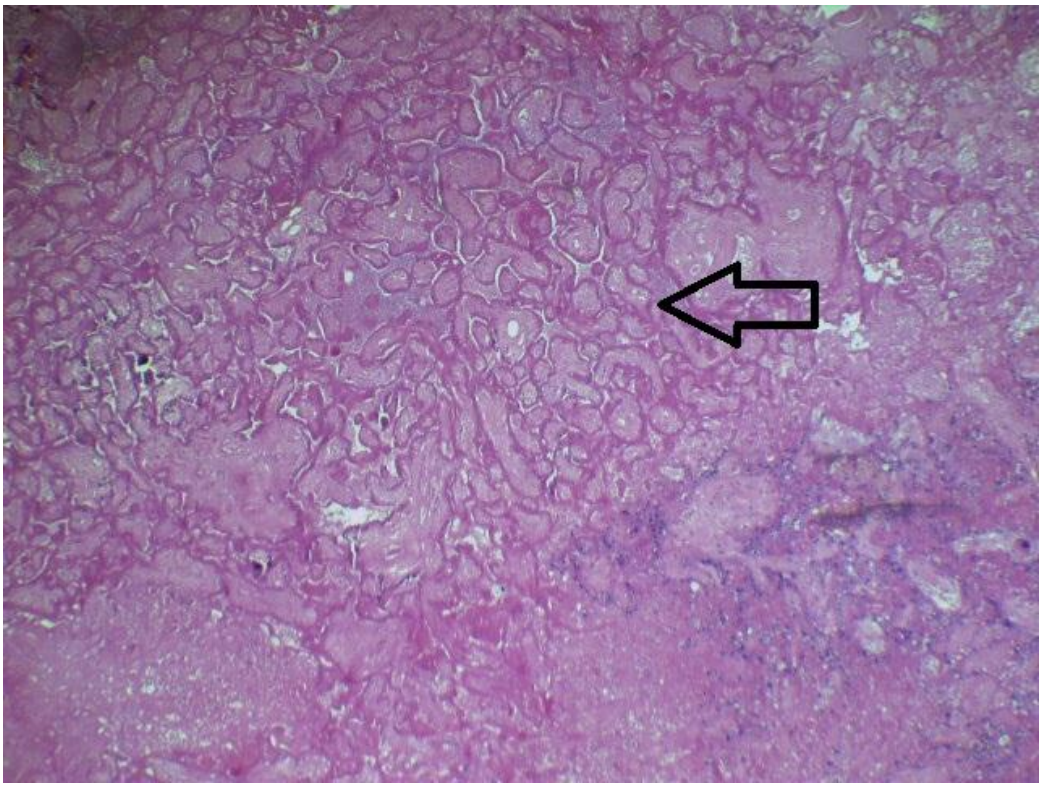

Figure 15: Mummified villi showing an old infarction.

DISCUSSION

Placenta previa (PP) is characterized by the abnormal implantation of placental tissue overlying the endocervical os. Placental implantation within 2 cm of the endocervix, but not overlying the os, is termed lowlying placenta (LLP).[1] As the delineations of previa have recently changed, we use the term previa to indicate PP or LLP. The incidence of previa worldwide is estimated be 1 in every 200 pregnancies.[2,3]

Previa is associated with increased maternal morbidity and mortality.[1] Women diagnosed with previa are at

increased risk of postpartum hemorrhage[1,4], the leading cause of maternal morbidity and mortality worldwide.[4]

Placenta previa often requires iatrogenic preterm birth (PTB) before 34 weeks because of maternal bleeding or spontaneous preterm labor.[5, 6] In a United States population-based study of live births, approximately 16.9% of women with placenta previa deliver before 34 weeks.[6]

Women with previa are at increased risk of requiring blood transfusions, post-partum emergent hysterectomy, and longer duration of hospitalization postpartum.[1,7]

Subsequently, neonates born to women with previa have been shown to required neonatal intensive care unit admission, and an increased risk of respiratory distress syndrome.[1,7] In order to reduce the risk of morbidity and mortality for both the mother and neonate, it is recommended that women with PP deliver via cesarean between 36 weeks and 37 weeks 6 days.[8] Risk factors associated with the development of previa have been well-established. Maternal risk factors supported by the literature include advanced maternal age (AMA), history of stillbirth, history of cesarean delivery, history of dilatation and evacuation, gravidity, tobacco use, and substance abuse.[7,9,10] Most cases of previa are diagnosed in the second trimester; of these, 90–95% resolve by the third trimester.[11,12] The remainder is considered persistent placenta previa (PPP).

A history of cesarean delivery is a well-documented risk factor for PPP. A study found that identification of previa at advancing gestational age directly correlated with the increased risk of persistence.[13] Another study found that posterior placental location had a stronger likelihood of PPP.[14]

Patients with placenta previa are at risk for fetal presentation abnormality, premature rupture of membranes, intrauterine growth retardation, vasa previa, and velamentous insertion of the umbilical cord (in which the placental end of the cord consists of diverging umbilical vessels surrounded only by fetal membranes).

If there is a history of cesarean section, placenta previa increases the risk of placenta accreta.

Management of placenta previa is expectant and involves avoidance of digital vaginal examination.

Transvaginal ultrasound is more accurate than transabdominal for diagnosing placenta previa and will probably be used with increasing frequency in difficult cases.[15,16,17]

The diagnosis of complete placenta previa was made when the internal cervical os was covered by placental tissue, it was defined as central if the placental edge was not visualized by TVS examination, it was defined as low- lying, when the lower edge of the placenta was within 3 cm from the internal cervical os.[18]

Magnetic resonance imaging has been shown to be more accurate than transabdominal ultrasound for diagnosing placenta previa.[19]

Hemorrhagic tottaly overlying placenta previa requires an emergency cesarean section.

The diagnosis of the threat of premature delivery (TPD) is made when a patient presents regular uterine contractions before term (37 weeks of amenorrhea) of regular and painful uterine contractions repeated at intervals of less than ten minutes and/or a cervical changeon vaginal touch.[20] TPD is most easily diagnosed in cases of premature rupture of the membranes or the occurrence of genital hemorrhage suggestive of a placental anomaly.[20]

TPD is one of the most frequent complications of pregnancy, the main risk of which is the birth of a premature baby. Prematurity is a source of significant perinatal mortality and morbidity.

The disadvantaged social class, low income, precariousness and low level are risk factors. The physical workload of women (standing and carrying loads) has been well demonstrated by Mamelle et al.[21] Women with a poorer pregnancy follow-up have a high risk of prematurity .[22, 23] Drug abuse and alcoholism are also isolated risk factors for preterm birth (P.B) but are often linked to other factors (poor follow-up, low socio-economic level), and the risk of P.B is also induced pregnancy and maternal smoking.

There is a proven link between bacterial vaginosis and preterm delivery.[24]

TPD can be a complication of totally overlying placenta previa, its first differential diagnosis is retroplacental hematoma.

A cervical length on endovaginal ultrasound of less than 3 cm confirms the diagnosis of TPD.

Several studies have suggested the value of cervical ultrasound, and the search for fetal fibronectin in vaginal secretions, to assess the risk of preterm delivery in pregnant women with a threat of premature delivery. In these patients, a relationship was shown between the incidence of preterm delivery and a decrease in cervical length.[25,26], or the presence of fetal fibronectin in vaginal secretions.[27,28,29,30] The positive predictive value (PPV) of these signs to predict preterm delivery was only 50%, but their negative predictive value (NPV) was generally greater than 85%. It was this high NPV that led to the conclusion that both tests were useful in assessing the prognosis of TPD.

The management of a TPD is based on three axes: hospitalization and the search for an etiology that benefits from specific management, proposing a symptomatic treatment including tocolytics (beta2 mimetics, nicardipine), preventing neonatal risks by administering protective treatments for the fetus: corticosteroids (betamethasone) for pulmonary maturation between 28 and 34 weeks of amenorrhea.

In case of twin pregnancy and/or scarred uterus, tocolysis done with nicardipine.

The effect of physical activity and stress on the increase in uterine contractility is well known.[31] For this reason, resting is often the first measure adopted in TPD, as it often leads to a decrease in uterine contractility alone.[32]

Retroplacental hematoma is formed by the blood insinuating itself between the separating placenta and the remaining deciduas basalis.

Retroplacental hematoma is a premature detachment of a placenta normally inserted into the uterus, usually after 20 weeks of pregnancy. It can be an obstetrical emergency. It may manifest as metrorrhagia, pain or a tender, hard uterus, hemorrhagic shock and disseminated intravascular coagulation (DIC). The diagnosis is clinical and sometimes aided by ultrasound. Treatment is based on activity modification (for example, a trial of bed rest for most of the day) in minor forms and immediate delivery if the fetus is unstable or the mother is near term.

Retroplacental hematoma increases the risk of morbidity or mortality in the woman, the fetus, or the newborn. It occurs in 0.4 to 1.5% of pregnancies.

Retroplacental hematoma can involve a variable area of the placental bed, ranging from a few millimeters to complete detachment. The separation may be acute or chronic. It is responsible for hemorrhages within the basal decidua below the insertion of the placenta. Most often, the etiology is unknown.

It may be complicated by maternal hemorrhage, which may be due to hemodynamic instability, with or without shock and/or with or without disseminated intravascular coagulation, and fetal suffering.

The risk factors are multiple among which: high maternal age, high blood pressure and pregnancy, abdominal trauma, tobacco consumption.

Our case described represents a high-risk pregnancy for the mother and for the two twins: a twin pregnancy on a scarred uterus in a patient at threat of premature delivery at 34 weeks of amenorrhea with a totally overlying hemorrhagic bichorial placenta previa and a retroplacental hematoma in both placentas, which potentiates the risk of fetal distress in the two twins. However, thanks to the rapidity of the management by the practice of an emergency caesarean section, we were able to save the mother and her two twins with a satisfactory result.

CONCLUSION

The etiologies of third trimester hemorrhage in pregnancy are multiple, dominated by placenta previa, retroplacental hematoma and uterine rupture.

The association of a totally overlying placenta previa and retroplacental hematoma as an etiology of third trimester hemorrhage of pregnancy is possible in the same patient, and represents an unprecedented case in bichorionic twin pregnancy with retroplacental hematoma in both placentas as described in our case.

Emergency cesarean section is the only possible mode of delivery for maternal and fetal rescue since the patient has a bichorionic gemellar pregnancy on a scarred uterus and a totally overlying hemorrhagic placenta previa with retroplacental hematoma in both placentas.

Retroplacental hematoma should always be considered as a differential diagnosis of threat of premature delivery as in our patient's case, despite the existence of an obvious cause of the hemorrhage, namely, totally overlying placenta previa.

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