

## A Rare Case of Spontaneous Hemoperitoneum in a Gravid Patient Uterine Variceal Rupture

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**Abstract:** Spontaneous rupture of uterine varix is an extremely rare condition with an incidence of 1 in 10000 pregnancies leading to significant fetal and maternal mortality. Its definitive diagnosis is extremely difficult at presentation and etiology is unknown. Most common etiology considered is increase in venous pressure. Most commonly this complication presents in third trimester and poses significant clinical dilemma.

This is a case of a 30-year-old patient with severe backache and abdominal pain since few hours limiting daily routine activities. She had acute fetal distress at admission and was suspected to have early placental abruption. Emergency laparotomy revealed 2.5 liters of hemoperitoneum with confirmation of diagnosis of spontaneous rupture of uterine varix.

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### I. Introduction

Spontaneous hemoperitoneum in pregnancy (SHiP) is a rare condition with an incidence of about 1 in 10000 pregnancies. About 5 decades ago, case fatality was 50%. But due to advancement of surgical and anesthetic techniques, improvement in medical technology, antenatal and intrapartum care, it has currently reduced to 3.6%. Diagnosis can be made only on exploratory diagnosis, it has a presentation resembling placental abruption, uterine rupture, acute appendicitis, etc. Yet, very few cases have been reported all over the world.

### ETIOLOGY

Pathogenesis is still a dilemma, however, widely accepted theory is that an increase in venous pressure may be responsible due to various causes leading to increase in the intra-abdominal pressure.

### PRESENTATION

This entity is a potentially fatal one; both for the mother and the baby. Presentation is variable and is often delayed by several hours. Acute abdomen with signs of hypovolemic shock, acute fetal distress or fetal demise; may be preceded by back ache and discomfort which may be disregarded due to its non-specific nature. These cases most commonly present in the third trimester.

### II. Case

We encountered a 30year old primigravida patient at 35.3 weeks of gestation referred from health center as a case of placental abruption. She presented in our emergency casualty with history of severe backache and persistent abdominal pain since 4 hours.

On examination, she had tachycardia with pulse of 120 beats per minute, BP of 120/80mmHg, pallor was noted. No other systemic abnormality was noted.

On per abdominal examination, abdomen was diffusely tender. Uterine height was at term, relaxed, no uterine activity was present. Amniotic fluid was clinically adequate. However, fetal heart rate was 76 beats per minute which was confirmed on ultrasound by radiologist.

On per vaginal examination, cervical dilatation of 1.5cm, effacement of 40% was noted with intact bag of membranes.

Patient and relatives were appropriately counselled, blood pints were cross matched and kept ready. After due consents, an emergency caesarean section was undertaken in view of acute fetal distress.

Her blood investigations were done; hemoglobin was 7gm% at the time of admission. Her renal and liver function tests were normal.

### **III. Operative Findings**

- Hemoperitoneum of 2.5 liters including 860 grams of clots
- 2.49kg baby was delivered by low transverse incision with Apgar score of 6 at 1minute and 9 at 5minutes
- Dense decidual reaction present on posterior uterine surface
- Adhesions present between posterior surface of uterus and sigmoid colon
- No active bleeding, no rent or rupture over uterine surface, no other abdominal organ injury or bleed and well retracted uterus
- Uterine varix present over the right anterior and left posterior uterine surface
- Active bleeding was noted from posterior uterine varix; this arrested spontaneously after uterotonics were given and uterus was retracted.

Multiple figure of eight hemostatic sutures were taken on the surface of the uterus and eventually hemostasis was achieved and therefore, the uterus was conserved successfully.



### **IV. Maternal And Fetal Outcome**

As patient had severe blood loss due to intra peritoneal bleed, she required resuscitation with 4 pints packed cells and 4 pints fresh frozen plasma intra/post operatively. However, rest no other complications occurred in the procedure. Post operatively, patient was shifted to the ward and was monitored closely. Post operative period was uneventful.

Immediately after birth, baby was taken to NICU for resuscitative care. Baby was successfully resuscitated and didn't require ventilator support. Baby maintained oxygen saturation on room air. Baby was observed in NICU for 48 hours and was shifted to mother's bedside after that.

Both mother and baby gained full health and was discharged on 7<sup>th</sup> post operative day.

### **DIFFERENTIAL DIAGNOSIS**

- Abruptio placentae
- Uterine rupture
- Subcapsular bleed in the liver
- Abdominal pregnancy
- Rupture of spleen or liver
- Appendix rupture
- Acute appendicitis

### **MANAGEMENT**

Emergency laparotomy is the only mode of action described in scarce literature available. And since extensive bleeding poses a serious diagnostic dilemma, this is generally the case.

If possible, and in stable maternal and fetal condition, preoperative ultrasound aids in diagnosing hemoperitoneum.

Diagnosis of this condition is challenging and rarely made prior to an exploratory laparotomy especially in absence of diagnostic imaging and is frequently misdiagnosed as more commonly above mentioned surgical and obstetrical complications.

Laparotomy following hemodynamic stabilization is vital in managing acute surgical emergencies with pregnancy.

#### **V. Discussion**

- Uterine variceal rupture most commonly presents with intraperitoneal hemorrhage in third trimester in pregnancy; the most common site being in the broad ligament.
- Possible source of bleeding is dilated uterine surface varices or decidualized endometriosis on utero ovarian vessels. This, compounded by increased vascularization of pregnancy.
- Activities increasing intra-abdominal pressure such as coughing, defecation, coitus, bearing down during second stage of labor etc. may thus cause these varices to give way.
- Predisposition to rupture could be due to tortuosity, lack of valves and repeated serial distension and collapse of vessels.



#### **References**

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