

# The case series of spontaneous hemoperitoneum in third trimester pregnancy



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## ABSTRACT

Spontaneous hemoperitoneum in pregnancy (SHiP) is unprovoked intraperitoneal bleeding. It is a rare entity but a life-threatening complication as it is associated with adverse pregnancy outcome. It is a surgical emergency and requires laparotomy to identify the cause. Complication of pregnancy and spontaneous hemoperitoneum was included in the study, and cases involving pregnancy termination and ectopic pregnancy were excluded from the study. Maternal demographics, description of spontaneous hemoperitoneum, and specific diagnosis and management were recorded. Data were extracted and entered in reporting forms. Median values were calculated for continuous variables, and percentages were calculated for categorical variables. The authors reported three cases of SHiP were seen. The gestational age of the patient included in the study was 36 weeks, 38 weeks, and 34 + 6 weeks, respectively. In the first 2 cases, clinical picture was pointing toward maternal hypovolemia while in 1<sup>st</sup> case ultrasound s/o fetal demise and in the 2<sup>nd</sup> case, there was fetal distress. In the 3<sup>rd</sup> mentioned case, fetal distress was observed on the examination, and hemoperitoneum was the incidental finding which was due to endometriosis. The cause of SHiP is rupture of posterior wall of the uterus, rupture of utero-ovarian vessels, and endometriosis.

**Key words:** Endometriosis; Twins; Abruptio placenta; Hemoperitoneum

## INTRODUCTION

Spontaneous hemoperitoneum in pregnancy (SHiP) is an intraperitoneal bleed which is nontraumatic.<sup>1</sup> Clinical presentation could be nonspecific or may present as acute abdominal pain, hypovolemic shock, and fetal distress or demise.<sup>2</sup> It is rare but life threatening and can be associated with adverse outcome of the pregnancy.<sup>3,4</sup> Maternal mortality in these cases can be reduced by improving resuscitative measure and operative techniques.<sup>5</sup> Although, perinatal mortality remains high.

## CASE REPORT

### Case 1

A 24-year-old, primigravida (twin pregnancy) with 36 weeks of gestation referred to our hospital with probable diagnosis

of abruptio placenta with intrauterine fetal death (IUFD) of both the fetuses. She had pulse rate of 150 bpm, blood pressure was 80/60 mmHg, with bilateral pedal edema. On abdominal examination, uterus was full term, abdomen was markedly tender. The fetal heart sound was not heard on Doppler. On per vaginal examination, mild bleeding was present and the cervical OS was closed. Ultrasonography (USG) suggestive of IUFD of both fetuses.

Provisional diagnosis of abruptio placenta or uterine rupture was made and emergency laparotomy/cesarean section performed. Hemoperitoneum of 700 ml observed. Anterior wall of uterus was inspected for any rupture or bleeding points but was found to be normal. Both the baby delivered. Placenta delivered with no retroplacental clots. Posterior surface of the uterus visualized, adhesion, and bleeding seen. The anterior rectal wall was also adherent

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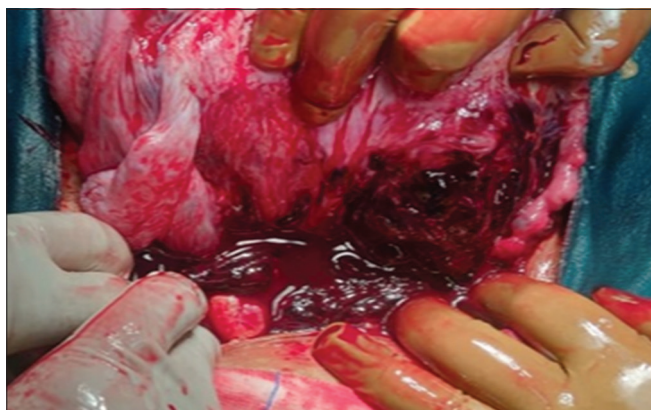
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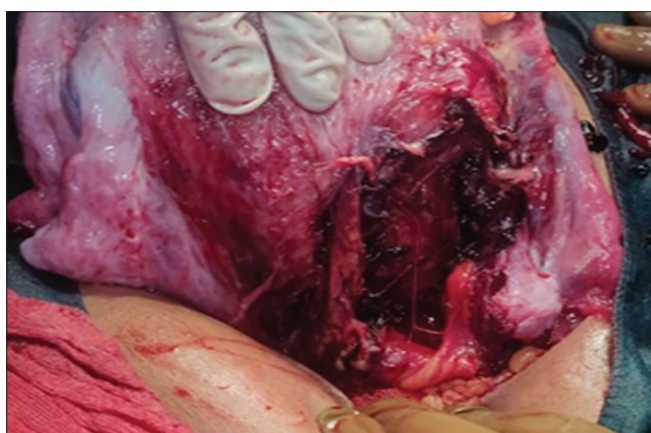
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to the posterior wall of uterus rectum, was checked for its integrity, and was found to be normal.



Hemostasis achieved by cauterization and ligation of bleeding points.

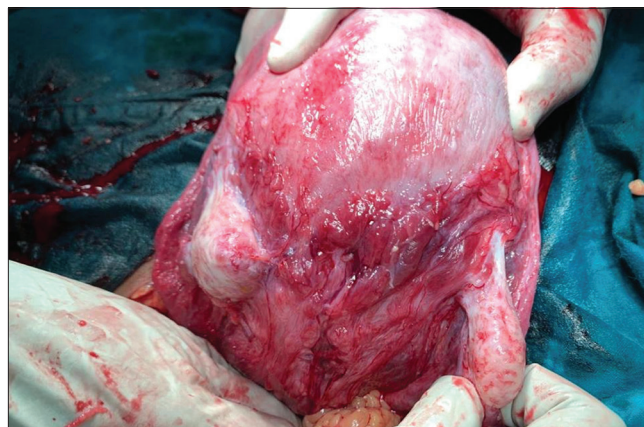


The intra-peritoneal drain was placed and the abdomen was closed in layers. The patient made uneventful recovery and discharged on seventh post-operative day.

### Case 2

32 year gravida 4 para 2 with 38 weeks of gestation referred to our hospital with pain in abdomen with fetal distress. She had pulse of 120 beats/min with blood pressure of 100/70 mmHg. On per abdominal examination uterus was term, cephalic presentation and fetal heart rate were 80 bpm, on per vaginal examination OS was 4 cm dilated with thick meconium stained liquor. Hemoglobin was 7 g/dl, Emergency laparotomy under spinal anesthesia performed. Once parietal peritoneum opened hemoperitoneum of approximately 900ml +, suctioned out. Baby delivered by the lower segment caesarean section. After exteriorizing uterus, incision site sutured. A slow continuous oozing site was found in the posterior wall of the uterus from ruptured superficial dilated vein. Hemostasis achieved by ligating the vessel. Intraoperative drain was placed and abdomen closed in layers. Intraoperatively 1 packed

cell transfused to the patient. Post-operative period was uneventful.



### Case 3

A 26 years, gravid 4 para 1 with 2 induced abortion with 34+6 weeks period of gestation presented with pain lower abdomen which was gradual in onset, continuous, and radiating to back. No pallor, edema seen, or lymph node felt. Systemic examination was normal. On per abdomen examination uterus was 34 weeks size, relaxed and fetal heart rate were of 180 beats/min. On investigation, hemoglobin-9g% total leukocyte count -13,400/mm<sup>3</sup>, platelet-3lac, normal bleeding, and clotting time. Liver function tests and renal function tests were normal. USG showed single live intrauterine pregnancy of 34+4 weeks with placenta posterior, adequate liquor, and normal Doppler study. Patient was shifted for lower segment caesarean section in view of persistent fetal tachycardia after informed consent. Intra operatively hemoperitoneum of 500cc present which was suctioned and the baby delivered and cried immediately after birth. After closure of uterine incision, uterus inspected for the site of bleeding, there was a laceration of around 4 cm x 2 cm near left ovary with oozing at the similar site. Abdominal cavity was also inspected to rule out any other cause of bleeding but no other cause of bleeding was found. Hemostasis achieved and intra-abdominal drain was placed. Abdomen closed in layers. Patient stood the place where it happens are broad ligaments (78.3%), the back surface of uterus (8.3%) and anterior surface of uterus (3.3%) according to Doger E et al.<sup>2</sup> It may be because of decasualized endometriosis on the utero-ovarian vessel wall. In this case the patient presented with pain lower abdomen and persistent fetal tachycardia for which caesarean section was done and the hemoperitoneum was detected incidentally. The other treatment modality can be arterial embolization which is effective and safe.

## DISCUSSION

The SHiP is acute emergency condition with high maternal and fetal morbidity and mortality.<sup>4</sup> It can occur

antepartum, intrapartum and postpartum.<sup>5,6</sup> Although, most commonly seen in 3<sup>rd</sup> trimester, either in labor or in postpartum period (within 42 days). The diagnosis is often made retrospectively after laparotomy.<sup>7</sup> Some of the few common causes of spontaneous hemoperitoneum in third trimester pregnancy are endometriosis, spontaneous rupture of uterine vessels, spontaneous rupture of varicose veins on surface of uterus, spontaneous rupture of previously unknown scarred uterus, and placenta percreta.<sup>8</sup> Recognition of SHiP is crucial to improve the pregnancy outcomes. The cause of SHiP is rupture of posterior wall of the uterus, rupture of utero-ovarian vessels, and endometriosis.

The gestational age of the patient included in this study was 36 weeks, 38 weeks, and 34+6 weeks, respectively. In the first 2 cases, clinical picture was pointing toward maternal hypovolemia while in 1<sup>st</sup> case ultrasound s/o fetal demise and in the 2<sup>nd</sup> case, there was fetal distress. In the 3<sup>rd</sup> mentioned case, fetal distress was observed on the examination, and hemoperitoneum was the incidental finding which was due to endometriosis. All the cases included in the study monitored postoperatively made remarkable clinical recovery and was discharged home.

## CONCLUSION

SHiP is rare and can easily be misdiagnosed. The chances of maternal mortality and perinatal infant are high. Therefore, early diagnosis and timely operation are important.<sup>9</sup>

High awareness of SHiP and its associated risk factors may facilitate the diagnosis of this condition and expedite the intervention to improve maternal and fetal outcomes.<sup>10</sup> The moral from this case series reminds the need and importance of deviating more pregnant women towards the hospitals to receive antenatal care. The hospitals should be well equipped with facilities of emergency surgeries, blood products, and better care.

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