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Couvelaire Uterus With Haemoperitoneum In A Young PRIMIGRAVIDA : A rare presentation.

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Abstract
Placental abruption, classically defined as a premature separation of the placenta before delivery, is one of the leading causes of vaginal bleeding in the second half of pregnancy. Approximately 0.4–1% of pregnancies are complicated by placental abruption. The prevalence is lower in the Nordic countries (0.38–0.51%) compared with the USA (0.6–1.0%). Placental abruption is also one of the most important causes of maternal morbidity and perinatal mortality. Couvelaire uterus or uteroplacental apoplexy is a severe form of abruption where there is widespread extravasation of blood into the uterine musculature and beneath the serosa. It is one of the complication of abruption placentae in which myometrial wall is infiltrated by blood leading to classic ecchymotic uterus appearance. In our case, there was concealed abruption placentae with no significant predisposing factor being revealed in history. Peroperatively, there was retroplacental clot with couvelaire uterus with haemoperitoneum but with no significant post operative complication. This case highlights the importance of high degree of clinical suspicion for abruption placenta even in the absence of known predisposing factors.

Keywords: *Placental abruption, uteroplacental apoplexy, concealed abruption placentae, retro placental clot, couvelaire uterus, haemoperitoneum*

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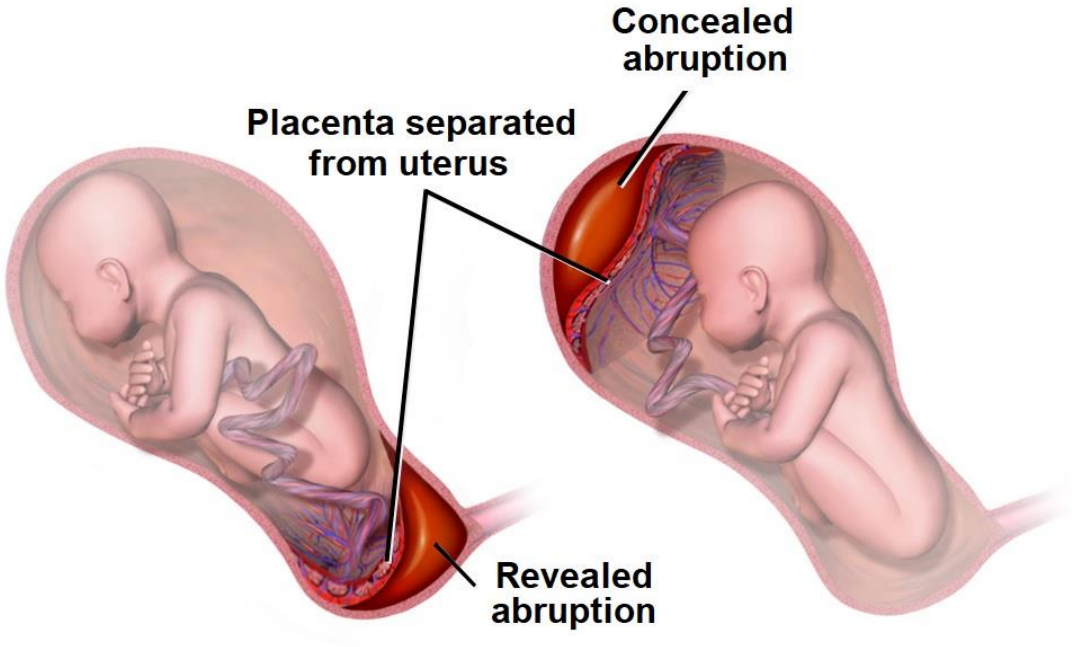
I. Introduction

Premature separation of a normally implanted placenta from the endometrium is referred to as abruptio placentae. It is one of the causes of bleeding during the second half of pregnancy. Placental abruption is a relatively rare but serious complication of pregnancy and placed the well-being of both mother and fetus at risk. Placental abruption is also called abruptio placentae.[1,2] Approximately, 0.4–1% of pregnancies are complicated by placental abruption.[3,5] It can be of *external* or "*revealed*" type in which there is vaginal bleeding or "*concealed*" type in which the blood is pent up between the placenta and membranes and the uterine wall without evident external bleeding and mixed or combined in which haemorrhage is partly revealed and partly concealed. It has been stated that the most important factor for causation of abruption placenta is hypertension. Although it has been seen that some connection exists between the severe form of concealed haemorrhage, couvelaire uterus and hypertension, however, hypertension is not an essential element and and in many cases it plays little or no role. Other factors which may be responsible for the separation of the placenta are accidents such as strains, fall or blow, short umbilical cord; sudden reduction of intrauterine tension following rupture of the membranes as in hydramnios or following birth of the first of twins. The supine hypotensive syndrome and rarely, torsion of the uterus may be the causative factors. [3,4] It can be 'partial' or 'total' depending upon the extent of it's detachment from the uterine wall.[5]



Case Report : A young primigravida who was 30 weeks and 2 days pregnant presented to the emergency with chief complaints of severe pain in abdomen since morning with two episodes of fainting. There was a history of fever four days back. No investigations were done to find the cause. She was prescribed combiflam twice a day which she took for three days before she developed severe pain abdomen. There was no history of headache, vomiting, visual disturbances or seizures. She was apparently having an uneventful ANC with just three visits to obstetrician till the episode of acute pain abdomen. She was married the year before and had a spontaneous conception. There was no significant medical, surgical or family history. On examination, she was average built with a height of 137 cm, weight of 58.2 kg, pulse rate of 106/min, BP of 100/70 mmHg, anxious face with dry skin and pallor was present; however, there was no edema. On per abdominal examination, abdomen appeared distended with gravid uterus but margin could not be defined. Also there was extreme tenderness over abdomen and it felt tense. A diagnosis of abruptio placenta was suspected. NST was done and it was non reassuring with fetal heart decelerations upto 80bpm. Along with preliminary resuscitations the patient was shifted to the OT for emergency LSCS. Spinal anaesthesia was given and abdomen was opened through pfannensteil incision. A frank haemoperitoneum was found. The baby was delivered quickly through a lower segment caesarean section. Immediate resuscitation was done on table and the baby was shifted to NICU for prematurity and respiratory depression. The placenta was delivered by controlled cord traction and no significant clot was found retroplacentally. The uterus was stiched in a single layer using continuous interrupted sutures with vycril no 1. B/L adnexa were explored and the haemoperitoneum was cleared from the abdominal cavity. Three large clots and blood was removed, but the cause of haemoperitoneum was still not found. Finally, when the POD was being cleared, active bleeding was seen from a rent in the posterior wall of the uterus. On digital exploration, the rent was found to be through the layers of uterus.

The rent was repaired with vycril no 1 and haemostasis was ensured. A diagnosis of concealed abruptio placentae with percolation of clot through the layers of uterine wall and perforation on serosal surface leading to haemoperitoneum was made. Abdominal cavity was thoroughly lavaged. blood was transfused in OT and abdomen was closed in layers after putting drain in situ.

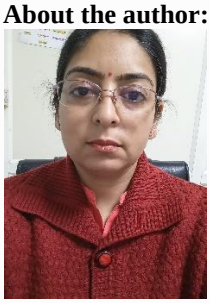
The patient was shifted to the ward after an uneventful stay in postoperative ward. Three more units of cross matched blood was transfused in ward after a post-operative Hb of 6gm/dl. Drain output was monitored every 6 hours and drain was removed on day 4 with satisfactory results.

Postoperatively, the patient developed paralytic ileus on day 1 which was managed by gastroenterologist. Patient showed prompt recovery and was discharged on day 6 after dressing of abdominal wound. Investigations revealed hemoglobin of 9.5 g/dl, total leukocyte count of 9500 and ESR of 53.

The baby required ventilator support and was admitted to NICU for 32 days before discharge.

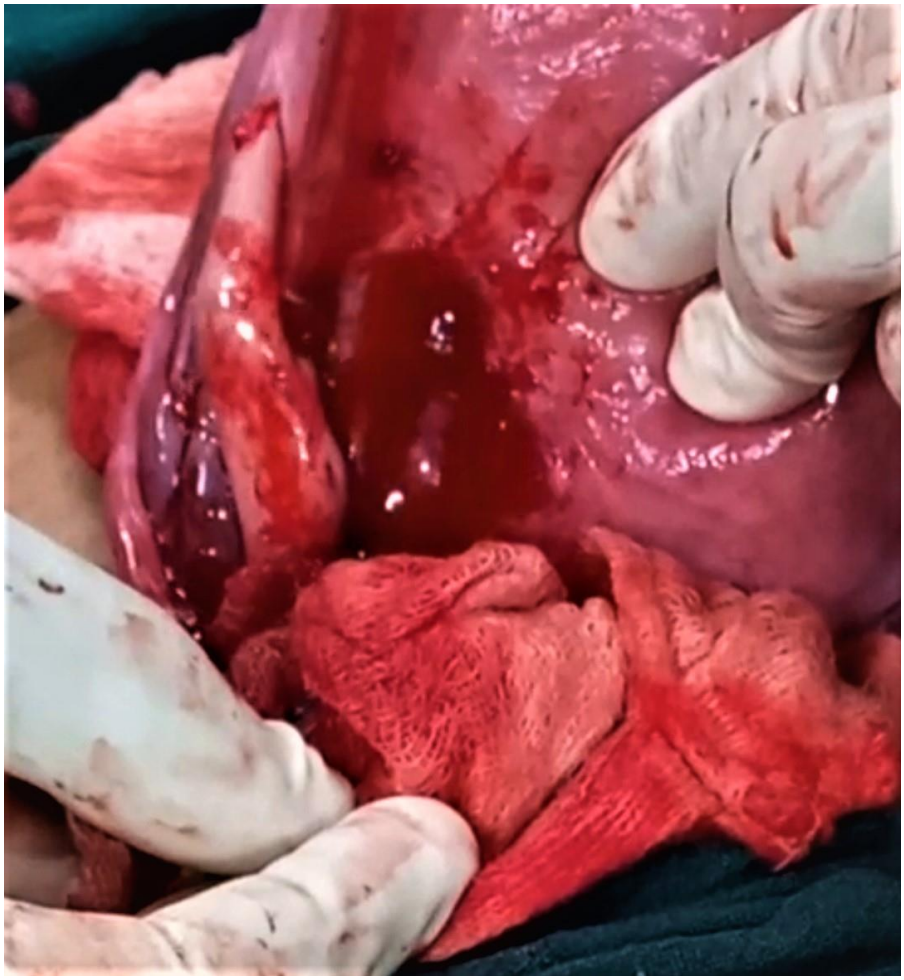
Compliance with Ethical Standards Conflict of interest
The authors declare that they have no conflicts of interest.

About the author:

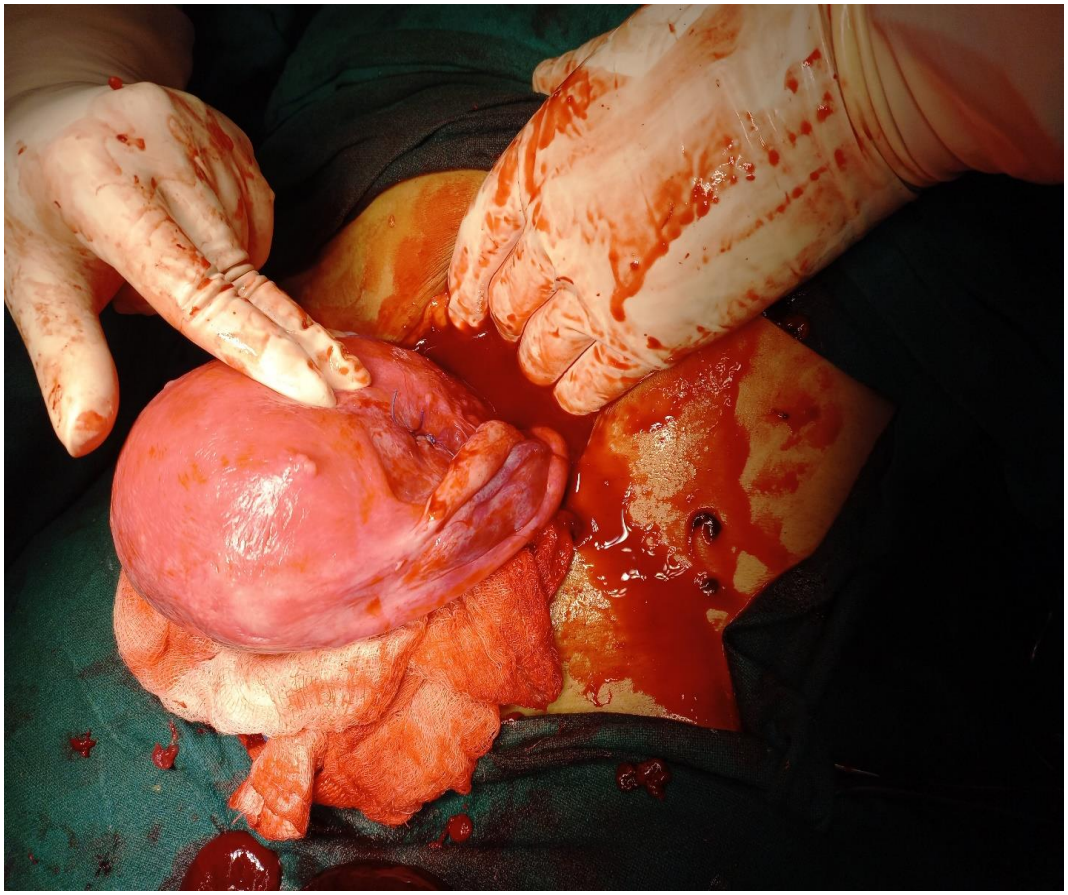


The author is presently working as an Assistant Professor in RAMA Medical college and Research Centre. She has worked in the department of Reproductive medicine for a period of five years at Regency Healthcare in Kanpur and specializes in management of infertility, recurrent pregnancy losses and high risk obstetrics. She is a designated member of World Association of Laparoscopic Surgeons (WALS), Indian Association of Gynaecological Endoscopy (IAGE), Indian Society for Assisted Reproduction (ISAR) and Kanpur Obstetrics and Gynaecological Society (KOGS). She is an excellent teacher. She is a dynamic orator and a diligent clinician.

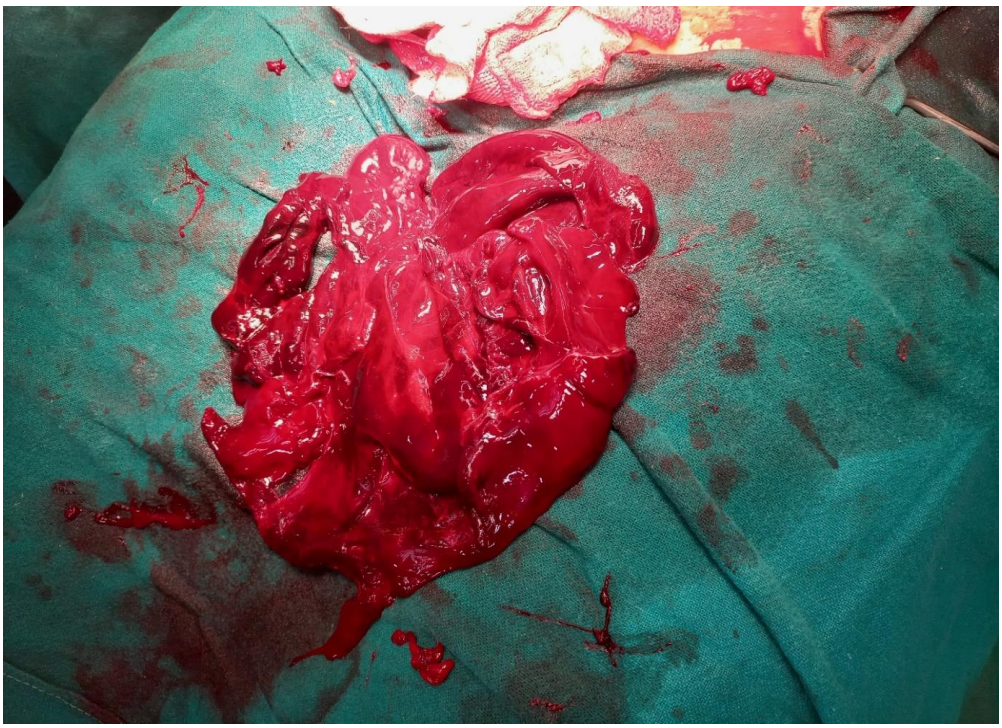
Informed Consent
Written informed consent was obtained from the patient for publication of this case report and accompanying images.



Beeding through rent on posterior wall of uterus



Haemostatic sutures applied to repair the rent



Clots recovered from the peritoneal cavity

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