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International Journal of Advanced Nursing Education
Volume 3 Issue 2, 2023
ISSN- 25827383

Successful Management of Abruptio Placenta with DIC-Case Report

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ABSTRACT

Disseminated intravascular coagulation (DIC) is a uncommon but serious complication of pregnancy. Placental abruption is the most common associated condition among the cases of acute obstetrical DIC. We are reporting a case of G2P1L1 with 29 weeks period of gestation referred from a local hospital with severe abdominal pain and bleeding per vagina, which was diagnosed as a case of Abruptio placentae. Intrauterine fetal death was confirmed on the ultrasound. Under general anesthesia, Emergency caesarean section was done in view of severe abruption with poor bishop score. Extracted a dead male fetus weighing 1.15kg. Retroplacental clot of around 500gram present with average blood loss of 2000ml with Couvelaire uterus. Intraoperatively 2-unit PRBC transfusion done. Post operatively patient developed DIC with severe anemia. Patient shifted to ICU and managed with transfusion of 5unit PRBC,11FFP, 4RDP and managed successfully.

Keywords: *Abruption, DIC, Emergency caesarean section, IUD, Antepartum hemorrhage.*

INTRODUCTION

Antepartum hemorrhage is defined as bleeding from or within the genital tract after 20th week of pregnancy before the onset of labor[1]. The important causes of antepartum hemorrhage are Placental abruption, placenta previa, vasa previa and Vasa previa. Placental abruption is defined as premature separation of a normally situated placenta. The reported incidence varies from 0.49% to 1.8%.[1]The etiology of placental abruption is unknown in most cases[1].Other etiologic factors include sudden decompression of the uterus after membrane rupture in patients with polyhydramnios and multiple pregnancy, external cephalic version, Hypertension, placental abnormalities (especially circumvallate placenta), abdominal trauma and increased levels of α-fetoprotein[1]. Abruption likely begins with rupture of a decidual spiral artery and hemorrhage into the decidual basalis. The subsequent expanding retroplacental hematoma splits the decidua and leaves a thin layer adherent to the myometrium. The decidual hematoma grows to lift away and compress the adjacent placenta.

Disseminated intravascular coagulation (DIC) is an uncommon but serious complication of pregnancy and placental abruption is the most common associated condition among the cases of acute obstetrical DIC[2].It is associated with high maternal mortality and morbidity. Management of DIC during pregnancy requires prompt attention to the underlying condition leading to this complication, including the delivery of patient and correction of the hemostatatic problem.

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CASE REPORT

G2P1L1 with 29 weeks period of gestation referred from a local hospital with complains of bleeding per-vagina and abdominal pain since 4 hours. On examination pallor++, pulse-90bpm, Blood pressure-90/60mmHg, Spo2 -98% at room air, CVS, RS-No abnormality detected, per abdomen- height of uterus corresponds to 32weeks size, tense, tender, cephalic presentation, fetal heart sound absent, Per vaginal examination- cervix uneffaced, 3cm long, admit 1 finger, bleeding through os present. Initial resuscitation done. Laboratory investigations sent. Hb- 6.7g/dl, Blood Group- O positive, Total leucocyte count- 16,000, Platelet count- 1.6lakhs/ml, Prothrombin Time- increased, aPTT- increased, INR-3.2 (increased), D Dimer-increased.RFT, LFT- within normal range .HIV, Hbsg, VDRL- non reactive, USG-confirmation of single fetus with absent cardiac activity with presence of retro-placental clots (around 500ml).Under general anesthesia, Emergency caesarean section was done in view of severe abruption with poor bishop score with hemodynamic instability. Extracted a dead male fetus weighing 1.15kg. Retroplacental clot of around 500gram present with blood loss of 2000ml Couvelaire uterus was present. Intraoperatively 2 unit PRBC transfusion done. Post operatively patient shifted to ICU and transfused 5 unit PRBC, 11 units FFP, 4 units RDP and managed successfully. Post transfusion haemoglobin 9.1g/dl. Suture removal done on post operative day 7 and discharged the patient on post operative day 10.

DISCUSSION

Abruptio placenta is defined as premature separation of normally situated placenta after 20 weeks of gestation and before the delivery of baby. It could be concealed, revealed or mixed. APH contributes to 2-5% complicated pregnancies among which abruption placenta is 0.5-1% and placenta previa is 0.33-0.5% [3]. Usually, it is presented as triad of abdominal pain, stony hard uterus and bleeding. The general condition of the patient does not entirely depend on the amount of blood loss, as abruptio can be associated with concealed hemorrhage in 10-20% cases [4]. Coagulopathy occurs in 10% in cases of abruption and is more common in cases of fetal distress or fetal death. Management depends on its severity, associated complications, the condition of the mother and the fetus, and gestational age. Expectant management is usually considered in cases of mild placental abruption occurring before 37 weeks' gestation. If it is <34 weeks with alive fetus with unfavourable cervix, 2 doses of steroid is administered and caesarean section is indicated. If fetus is dead with favourable bishop score, labor is augmented with ARM and oxytocin infusion, facilitate vaginal delivery. Whether fetus is alive or dead in presence of massive bleeding, caesarean section is indicated.

Placental abruption is the most common cause of clinically profound consumptive coagulopathy in obstetrics. Sher G et.al quoted that DIC in 10-20% of his study patients with severe abruption and fetal demise [6]. A primary consequence of intravascular coagulation is the activation of plasminogen to plasmin, which then lyses fibrin micro emboli to maintain

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microcirculatory patency. With placental abruption severe enough to kill the fetus, pathological levels of fibrinogen– fibrin degradation products and D-dimers are almost always found in maternal serum. Their quantification is not clinically useful. Maternal complications include Preterm premature rupture of membranes, Preterm labour, PPH, DIC, Renal failure, Hypovolemic shock. Fetal complications are Preterm birth, birth asphyxia, Small for gestation age, Fetal demise.

Consumptive coagulopathy is more likely with a concealed abruption because intrauterine pressure is higher. This forces more thromboplastin into the large veins draining the implantation site. With a partial abruption and a live fetus, severe coagulation defects are less common.

When the patient presents with disseminated intravascular coagulation, stabilize the patient with fluid and blood products. If it is associated with hypertension, control the blood pressure with anti-hypertensives. For massive transfusion 'rule of 4' is applicable, i.e, fresh frozen plasma, platelets, and packed RBC in ratio of 1:1:1(5).

At the time of cesarean delivery, it is not uncommon to find widespread extravasation of blood into the uterine musculature and beneath the serosa. This phenomenon is named after Couvelaire, who in the early 1900s termed it uteroplacental apoplexy. These myometrial hemorrhages may incite uterine atony, but are not a sole indication for hysterectomy. Effusions of blood may collect beneath the tubal serosa, between the leaves of the broad ligaments, in the ovaries, or in the peritoneal cavity.

CONCLUSION

Abruptio placentae with DIC requires a multidisciplinary approach for diagnosis and management. Early decision to remove triggers and perioperative management including mechanical ventilatory support with strict monitoring, laboratory parameter checks, and transfusion of blood substitutes will result in successful outcome**.**

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