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Case Report

A Couvelaire Uterus: A Case of Successful Management

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Abstract

A clinical case of Couvelaire uterus in a primigravida with low-risk pregnancy is presented. The reasons for the delayed diagnosis of placental abruption are discussed.

Keywords: Pregnancy; Placental Abruption; Couvelaire Uterus; Cesarean Section

Introduction

Couvelaire uterus is a serious complication of placental abruption. The occurrence of this condition is not exactly known, since the diagnosis is established only by visual examination of the uterus at laparotomy. In some cases with total placental abruption delivery per vias naturales is possible; therefore no reason to talk about Couvelaire uterus without direct assessment in these situations [1]. Until recently Couvelaire uterus was considered an indication for hysterectomy [2]. This is indicated in cases with the development of uterine hypotonia and disseminated intravascular coagulopathy. However, with good contractility of the uterus even in severe cases it is possible to avoid hysterectomy as also evidenced by literature data [3]. We present the case of successful management of total placental abruption with Couvelaire uterus.

Case Report

A 21-year-old patient M., gravida 1 para 0, was admitted to the perinatal center 12.04.2019 at 17.30 with complains of abdominal pain and absent of fetal movement. Term of pregnancy was 36 weeks and 1 day. The patient's past anamnesis was unremarkable. BMI 24.

It was found out that abdominal pain without clear localization first appeared around 9.00 in the morning but did not cause serious concern. Nevertheless, the patient was consulted at the clinic for prenatal care. Normal pattern of CTG was recorded and the patient's cervix was closed. The patient was advised to use spasmolytic. In spite of this at about 15.00 pain intensified and patient visit a doctor again. An ultrasound was performed: sizes of fetus in cephalic presentation corresponded to 36 weeks of pregnancy, placenta was on posterior uterine wall, fetal heart rate was 118-124 beats per minute. Blood pressure was 115/75 mm Hg, an abdomen was soft. Speculum examination showed scanty spotting. Per vaginal examination revealed opening of cervical canal up to 2 cm with intact amniotic membranes and. Laboratory tests: hemoglobin 119 g/l, hematocrit 36.6%, platelets $297x10^9$/l. These events were considered as the onset of labor, and patient was recommended for admission to the perinatal center.

At admission intrauterine fetal death was diagnosed by ultrasound examination. Uterine contractions were irregular. Blood pressure 110/75 mm Hg. Amniotomy was performed, we found colorless amniotic fluid. At 18.45 there was severe abdominal pain. The uterus was tense without relaxation between contractions (so called woody uterus). Per vaginal examination was revealed the same status of cervical opening. The patient was severe excited. According these clinical appearances abruption of placenta was suspected and patient was operated.

Cesarean section at low uterine segment by transverse incision was performed. At 19.03 dead fetus 2350 g was delivered. Immediately placenta delivered with more than 500 ml retroplacental clots. After exteriorization the uterus was found to be purple, almost dark, ecchymotic with severe imbibitions of parametrical areas (Figure 1).

Figure 1: Couvelaire uterus.

The diagnosis of Couvelaire uterus was made. Despite the pronounced imbibitions contractility of uterus was preserved. The uterus was repaired by double-layer suture. By the time of complete suturing, some parts of uterus became pink. Intravenously infusion of oxytocic was performed immediately after delivering fetus and placenta. Given condition of uterus and stable hemodynamic state of patient it was decided not to perform hysterectomy. After operation misoprostol per rectum was administered for prophylaxis of uterine hypotonia.

At early postoperative period laboratory signs of severe bleeding and low coagulation were noted: hemoglobin 79 g/l, hematocrit 22.1%, fibrinogen 1.83 g/l, platelets $38x10^9$/l. The patient was transfused 1345 ml of packed cells, 1220 ml of fresh-frozen plasma, 6 dozes of cryoprecipitate and 8 dozes of platelets. She was given meropenem 1 g every 8 hours for 5 days. There was also an increase in creatinine level up to 230 mcmol/l with polyuria – it was regarded as mild acute kidney impairment. Besides the ophthalmologic examination revealed papillary edema. All these pathological changes were resolved by 5 days of treatment.

Discussion

This case is interesting for the following reasons. At first, no risk factors (smoking, cocaine, overdistension of uterus, trauma, pre-eclampsia etc.) for placental abruption were identified in a young patient [2,3]. Moreover, examination for congenital and acquired thrombophilias in postoperative stage was negative.

At second, the course of placental abruption was not obvious. Early clinical appearances of pathological process were perceived as signs of impending preterm labor. A typical picture of placental abruption arose only after excessive infiltration of uterus with the blood. Perhaps this course of placental abruption was provided by localization of placenta on posterior uterine wall and slow imbibitions of uterus - it took about 11 hours. Of course, absence of vaginal bleeding played an important role in belated diagnosis. The diagnosis of placental abruption is often a clinical one with limited opportunities of ultrasound examination [4,5].

At third, the preservation of the contractile ability of the uterus made it possible to avoid hysterectomy, which would have been a serious psychological trauma for the patient given the death of the fetus. The possibility of postpartum bleeding due to hypotension should not be a reason for a "prophylactic hysterectomy".

Conclusion

Placental abruption is an extremely serious complication that can occur without any predisposing factors. It is very important for obstetrician to be aware of the possible clinical manifestations of placental abruption and to be alert to this complication of pregnancy. In a case of Couvelaire uterus it is possible to preserve uterus in the absence of bleeding and DIC and stable hemodynamics.

Conflict of Interest

The author declares that there are no conflicts of interest.

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