Introduction

Premature separation of the placenta, i.e., placental abruption is a severe condition complicating 0.4% to 1.0% of deliveries [1,2]. It is one of the ischemic placental diseases [3]. There are many chronic clinical conditions and epidemiological factors that increase the risk of placental abruption [1,2,4]. Most cases of placental abruption, however, cannot be predicted [1,5]. Sexual activity in pregnancy is regarded safe [6-8]. In contrast to this, we hereby report a case demonstrating that orgasmic coitus triggered placental abruption resulting in stillbirth.

Case History

A 38-year-old Caucasian woman (8-para, 12-gravida, body mass index 30.1) was brought into hospital by ambulance after developing severe vaginal bleeding at 29 weeks gestation. Her last antenatal appointment was 5 weeks preceding admission when ultrasound examination showed eutrophic fetus. No anemia and diabetes were shown during the antenatal period but she had gestational hypertension successfully treated with nifedipine (2 x 20 mg, Cordaflex, EGIS). Patient lived unmarriedly with a constant partner in low socioeconomic conditions. Her past medical history revealed no illness. Her previous 7 pregnancies and deliveries including one twin pregnancy were without complications. In addition, she had two pregnancy terminations and her two pregnancies ended in first trimester miscarriage.

On admission, patient had massive uterine bleeding with...
a tachycardia of 110 b.p.m. and blood pressure of 110/70 mmHg. Her temperature was normal. Physical examination revealed uterine hypertonicity and tenderness, regular labor pains with uterine mouth dilated to 5 cm, and with intact fetal membranes. The fetus was in breech presentation. Ultrasonography showed an eutrophic fetus without fetal heart activity, normally implanted placenta and retroplacental hematoma measuring 4 x 5 cm. Urgent laboratory tests revealed that she had hemoglobin of 9.6 g/dl, hematocrit of 27%, platelet of 140 x 10^9/l, total white cell count of 19.6 x 10^9/l, INR of 2.0, D-dimer > 38.85 mg/l and C-reactive protein of 5.0 mg/l. Liver and kidney function tests were within normal limits. Placental abruption and fetal demise were diagnosed. At the emergency cesarean section, a dead female infant weighing 1,510 g was born. Patient received crystalloid infusion, 6 units of packed red cells and 3 units of fresh frozen plasma then her recovery occurred rapidly and uneventfully. Fetal pathology was normal. Placental histopathology confirmed retroplacental hematoma. Adjacent to it villous and decidual hemorrhages were found, furthermore, focal distal villus hypoplasia and avascular villuses were seen. Villous infarctions, increased syncytotrophoblast knotting or pigmented histiocytes were not shown.

In a personal interview following surgery, patient denied intimate partner violence, recent abdominal trauma, vaginal bleeding in the first half of pregnancy, drug abuse, alcohol use and smoking. She told us that she had sexual intercourse during pregnancy 2 to 4 times a month and achieved orgasm within 15 minutes after the last orgasm, the rhythmic contractions cease [17,18]. Consequently, pelvic congestion and uterine contractions working together can acutely impair the uteroplacental perfusion during and following the orgasmic episodes, and thus orgasm may result in placental abruption in those women whose uteroplacental perfusion has already been damaged by chronic processes [5]. The chronic placental disease was proven in our patient as well. Pathomechanism of placental abruption, above outlined is consistent with the findings that pregnant women of advanced maternal age have a higher risk for uterine bleeding following coitus [10], and advanced maternal age is correlated with the imbalance in angiogenic growth mediators and oxidative stress biomarkers [19]. Since the blood pressure during sexual activity increases [20], it may be a contributory mechanism for the abruption, particularly in pregnant women with hypertension.

In women with placental abruption vaginal delivery is usually preferred if the fetus has died [4]. In our patient, however, the uterine hemorrhage was so brisk and massive that prompt delivery became necessary in order to stop bleeding quickly. That is why emergency cesarean delivery was chosen.

Our case report has shown that orgasmic coitus triggered placental abruption which resulted in preterm stillbirth in a pluripara woman with gestational hypertension, and the abruption was linked to placental disease.

Conclusion

It has been concluded that orgasmic coitus may trigger severe placental abruption in women with high risks for placental disease. This knowledge is counselled to apply during the antenatal care in order to prevent placental abruption and its complications, i.e. sexual intercourse is advised to avoid in such pregnancy.

Acknowledgments

Ethics approval

Authors state that the study protocol was approved by the Institutional Review Board before the study.
Informed consent

Authors confirm that the patient in case report gave written informed consent before the study began.

Author contributions

MZ conceptualized the study design, drafted and revised the manuscript. MV prepared data for the work and revised the manuscript. HP revised the manuscript. BP and DH carried out pathologic evaluation. AP conducted the study, drafted, wrote and revised the manuscript. All authors approved the final manuscript and agreed to be accountable for all aspects of the work.

References