

The Necessity of Awareness of Early Symptoms of Placental Abruption Among Pregnant Japanese Women

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Abstract

Background: In 2012, the recommendation for immediate contact and visit to obstetric institutions by pregnant women was emphasized by The Japan Obstetric Compensation System for Cerebral Palsy (JOCS). In this study, we examined whether or not the increased awareness has led to the improvement of perinatal outcomes of placental abruption managed at private clinics.

Methods: We reviewed the obstetric records of 38 singleton pregnant women complicated by placental abruption that developed at home, and were managed at private clinics from April 2008 through April 2016.

Results: The perinatal outcomes, specifically the rate of cases with ≥ 1 hour time interval between symptom onset and clinic visit, have not changed significantly after the intervention.

Conclusion: The provision of information regarding the early clinical symptoms associated with placental abruption in pregnant women has not been well documented in Japan.

Keywords: Placental abruption; Early symptoms; Provision of information; Japan

Introduction

The Japan Obstetric Compensation System for Cerebral Palsy (JOCS) was launched in January 2009 to compensate for the economic burden of children with severe cerebral palsy (CP) associated with delivery and to conduct an analysis of the factors contributing to CP, with the goal of improving the quality

of health care of the Japanese. In the second annual report of JOCS on May 2012 [1], a history of placental abruption was identified in 20 (25.3%) of 79 cases of severe CP. Therefore, immediate contact and visit to obstetric institutions has been recommended for pregnant women with symptoms such as abdominal pains, genital bleeding and decreased fetal movements, because women take longer to visit medical institutions [1, 2]. In addition, about half of all deliveries in Japan are managed at private clinics; patients with placental abruption managed at private clinics need to be transported to perinatal centers for prompt intervention [3]. Moreover, obstetricians were informed that the symptoms of placental abruption appear to be similar to those of preterm labor [1]. In this study, we examined whether or not awareness of the condition has led to the improvement of perinatal outcomes of placental abruption managed at private clinics.

Methods

The protocol for this study was approved by the Ethics Committee of the Japanese Red Cross Katsushika Maternity Hospital. Informed consent concerning analysis from a retrospective database was obtained from all subjects.

We reviewed the obstetric records of 38 singleton pregnant women complicated by placental abruption that developed at home, and were managed at private clinics from April 2008 through April 2016. Placental abruption was defined as separation of a normally implanted placenta, based on massive retro-placental bleeding after 24 weeks of gestation. All cases were delivered by cesarean section because of a non-reassuring fetal status and/or an immature cervix. There were no cases with prior placental abruption, preterm labor, or hypertensive disorders requiring ambulatory management. In this study, the 38 cases with placental abruption were divided into two groups of before ($n = 20$) and after ($n = 18$) the intervention. We examined the perinatal characteristics and outcomes, including maternal age, parity, gestational age at delivery, time interval between symptom onset and clinic visit, time interval between clinic visit and delivery, intrauterine fetal demise (IUID), umbilical artery (UA) pH less than 7.0, postpartum hemorrhage (PPH) requiring hemotransfusion, and maternal disseminated intravascular coagulation (DIC).

Data were presented as numbers (%). For the statistical

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Table 1. Perinatal Characteristics and Outcomes of 38 Patients Complicated by Placental Abruption That Developed at Home and Managed at Private Clinics

	Before the enlightenment	After the enlightenment	P-value
Number of patients	20	18	
Maternal age \geq 35 years	9 (45%)	6 (33%)	0.463
Nulliparity	12 (60%)	15 (83%)	0.113
Gestational age $<$ 37 weeks	18 (90%)	17 (94%)	0.612
Neonatal birth weight $<$ 2,500 g	17 (85%)	16 (89%)	0.723
Time interval from symptom onset to clinic visit \geq 60 min	15 (75%)	16 (78%)	0.270
Intrauterine fetal demise	2 (10%)	0 (0%)	0.189
Live births	18	18	
Time interval from clinic visit to delivery \geq 60 min	15 (83%)	8 (44%)	0.015
Umbilical artery pH $<$ 7	6 (33%)	3 (17%)	0.248
Total blood loss \geq 2,000 g	8 (40%)	6 (33%)	0.671
Hemotransfusion	11 (55%)	9 (50%)	0.758
Disseminated intravascular coagulation	9 (50%)	6 (33%)	0.463

analysis, the X^2 test with Yates' correction was used for categorical variables. A P-value $<$ 0.05 was considered significant.

Results

Table 1 shows the perinatal characteristics and outcomes of the 38 patients complicated by placental abruption that developed at home and managed in private clinics. As shown in Table 1, the rate of cases with \geq 1 h time interval between clinic visit and delivery decreased significantly after the intervention. There were no significant differences between the two groups in the other variables, such as perinatal outcomes and the rate of cases with \geq 1 h time interval between symptom onset and clinic visit.

Discussion

In cases of severe placental abruption, a short time interval between decision and delivery has been observed to contribute to the substantially reduced neonatal morbidity and mortality [3, 4]. Although the decreased rate of cases with \geq 1 h time interval between clinic visit and delivery did not contribute to the improvement of perinatal outcomes of placental abruption in this study, it suggests an increase in the awareness of placental abruption in the obstetricians working at clinics. On the other hand, the rate of cases with \geq 1 h time interval between symptom onset and clinic visit has not changed measurably after the intervention. It may suggest that the provision of information regarding early clinical symptoms associated with placental

abruption to pregnant women has not been well documented in Japan.

This study may be small, but it gave us a serious overview of the problem concerning the necessity of awareness of early symptoms of placental abruption for pregnant women in Japan.

Conflicts of Interest

The authors report no conflicts of interest.

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