



Obstetrics and Gynaecology Cases - Reviews

CASE REPORT

Case of Outpatient Pregnancy Prolongation at Premature Rupture of Membranes before Reaching the Viability Term

YE Dobrokhotova^{1*}, AS Olenev², PA Kuzetsov^{1,2}, LS Djokhadze¹ and KI Konstantinova¹

¹Faculty of Medicine, Chair of Obstetrics and Gynecology, Pirogov Russian National Research Medical University, Moscow, Russia

²Department of Health, Perinatal Center, City Clinical Hospital No. 24, Moscow, Russia

*Corresponding author: Yulia Eduardovna Dobrokhotova, DMS, Faculty of Medicine, Professor, Head, Chair of Obstetrics and Gynecology, Pirogov RNRMU, Ostrovityanova Street, 117997, Moscow, Russia, Tel: (495)-237-4033, E-mail: pr.dobrokhotova@mail.ru



Abstract

Premature rupture of membranes is not losing its topicality, as one third of all the premature deliveries starts with the discharge of the amniotic fluid. Despite the fact that the treatment tactics is represented in the normative documents, the world literature describes cases of the outpatient management of patients. The given article describes the case of a successful pregnancy completion as a result of outpatient management, which is considered to be an acceptable option in the case of the pregnant woman and fetus stable state, which allows to avoid nosocomial infections.

Keywords

Premature rupture of membranes, Preterm delivery, Outpatient management

Introduction

Premature rupture of membranes (PROM) appears to be the spontaneous rupture of the amniotic sac before the beginning of the labor activity and before the 37th week of pregnancy. The given complication is registered in approximately 3% of all pregnancy cases. Every third premature delivery starts with the PROM [1].

Several risk factors of the premature rupture of membranes were identified. One of them is the intrauterine infectious process. Low social and economic status, harmful habits (tobacco smoking and drugs), low body mass index (less than 19.8 kg/m²), as well as insufficient food consumption are predisposing to PROM. The PROM risk is significantly higher with women, who

experienced premature rupture of membranes during a previous pregnancy. However, in most cases the PROM occur without any predisposing factors [2].

With every second pregnant woman, who previously experienced the PROM, the labor activity will develop within a week, while with the 75% - within 2 weeks [3]. During pregnancy at the term of 28 to 37 weeks, complicated by premature discharge of amniotic fluid, labor activity starts spontaneously in the course of the next 24-48 hours with 50% of women and within 7 days with 70-90% of women. If the discharge of amniotic fluid is registered before the 28th week of pregnancy, labor activity starts significantly later [4,5]. In a number of cases it is possible to prolong pregnancy for a few days, weeks and even months. As of today, the tactics of the incomplete pregnancy follow-up complicated by PROM, respiratory distress syndrome (RDS) and infectious complications prevention is relatively defined. The differences could be found only in the term of delivery [2]. Guidelines are envisaging the inpatient management of patients with PROM at immature pregnancy. However, the world literature describes individual cases of outpatient management of such pregnant women. Moreover, there are two randomized studies, in the course of which a comparison of outpatient and inpatient management of patients with PROM before term was carried out [6,7]. Unfortunately, the insufficient sampling did not allow to arrive at justified conclusions about the benefits of the one or another option.



Citation: Dobrokhotova YE, Olenev AS, Kuzetsov PA, Djokhadze LS, Konstantinova KI (2018) Case of Outpatient Pregnancy Prolongation at Premature Rupture of Membranes before Reaching the Viability Term. *Obstet Gynecol Cases Rev* 5:118. doi.org/10.23937/2377-9004/1410118

Received: April 22, 2017; **Accepted:** February 14, 2018; **Published:** February 16, 2018

Copyright: © 2018 Dobrokhotova YE, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

It is believed that the prolongation of pregnancy at PROM at the term of up to 22 weeks is impractical due to the unfavorable prognosis for fetus (below the vitality term) and high frequency of septic complications with mothers. It is recommended that pregnancy should be terminated [8,9]. Dotters-Katz, et al. conducted a case-control study [10], analyzing all the cases of the spontaneous PROM before 22 weeks in the absence of indications for urgent pregnancy termination (chorioamnionitis). Out of 174 patients, who satisfied the selection criteria, 65 chose pregnancy termination; and 109 (63%) insisted on the conservative tactics. According to the results, every seventh patient, regardless of which tactic was selected, experienced serious complications (septic or thromboembolic) [10]. In our article we present the description of the case of a successful completion of pregnancy at PROM at the term of 18 weeks of pregnancy under the outpatient management.

Case Description

Patient B, age 29. Somatic condition: Mild myopia. The patient denied any gynecological diseases. The given pregnancy was the third; and it was spontaneous. The first pregnancy in 2010 ended with the premature delivery at 32 weeks, a boy was born 1300 grams and 40 cm: The patient was discharged on day 7. The child was released after 2 weeks. Currently the child is developing without peculiarities. During the second pregnancy the patient experienced delivery at term; a baby girl was born, 3000 grams, 50 cm; the patient was discharged on day 3 without complications. At the term of 18 weeks, the patient experienced liquid discharge from the vagina. The doctor was not addressed. At the term of 20 weeks the discharge intensified, and the pregnant woman independently applied for ultrasound examination at a commercial center. Ultrasound examination revealed severe oligohydramnion (3 cm AFI). B was hospitalized for in stationary treatment. The examination and amnio test results confirmed PROM. Taking into consideration PROM at the term of 20 weeks, the pregnancy termination was proposed, which was categorically rejected by the patient; and she was discharged.

At the term of 24 weeks patient B applied for a consultation to the Consultation and Diagnostics Department of the Perinatal Center. In the course of the examination the discharge of amniotic fluid was confirmed. According to the ultrasound examination the moderate oligohydramnion (6 cm AFI) was observed: And the fetus development corresponded to the gestational age. The blood flow dopplerometry stayed within the normal range. The patient was hospitalized at the Department of Pregnancy Pathology of the Perinatal Center, where she was subjected to treatment aimed at the pregnancy prolongation, fetus RDS prevention controlled by the blood flow dopplerometry and amniotic fluid amount. Against the background of the carried out therapy, the intensity of the amniotic fluid discharge gradually de-

creased; and the amount of amniotic fluid increased. At the term of 28 weeks the patient was discharged followed by observation at the Consultation and Diagnostics Department (CDD). At the time of release, the child's size corresponded to the gestational age (980 g estimated fetal weight); and the amount of amniotic fluid indicated moderate oligohydramnion (7.2 cm amniotic fluid index). There were no infectious process indicators observed (temperature within the normal range, 9.7 blood leukocytes, negative C-reactive protein).

Further, the patient visited the CDD regularly 2 times a week. At each visit, clinical blood test was carried out, amniotic fluid index was evaluated; and blood flow dopplerometry was performed (and cardiotocography - after 32 weeks). Due to the fact that the negative dynamics on these parameters was not registered, the patient was further monitored in the outpatient manner.

Patient B was admitted at the maternity hospital. The patient arrived at the term of 35 weeks with symptoms of the threatening premature delivery (nagging pain in the lower abdomen, mucous and sanious discharge from the genital tract). Diagnosis at admission stated the 35 weeks pregnancy, breech presentation, threatening preterm delivery, PROM.

The patient was hospitalized at the Department of Pregnancy Pathology; the therapy was started aimed at the pregnancy prolongation (tocolysis using hexoprenaline). A day later labor started developing against the background of tocolysis. Taking into consideration the breech presentation and the estimated fetal weight less than 2.0 kg, the patient was recommended to perform cesarean section. The patient refused categorically. It was decided to carry out the labor in the expectative manner accompanied by cardiotocography monitoring, and epidural analgesia. A living premature girl was born weighting 1990 grams, 43 cm, and the Apgar score 7/7 points. The child was transferred to the Resuscitation and Intensive Care Department with the primary diagnosis of "congenital infection". Respiratory support was not required. Antibacterial therapy was performed with supplemental oxygen provided through a mask. On the third day the child was transferred to the neonatal department.

After the delivery of the placenta the defect of the placenta was found, manual examination of the uterine cavity was performed.

The first labor stage constituted 5 hours and 50 minutes, the second stage - 10 minutes and the third stage - 10 minutes. The membrane rupture to delivery interval lasted for 96 days.

There were no complications registered during the postpartum period. Taking into consideration the prolonged rupture to delivery interval and the manual examination of the uterine cavity, a course of antibacterial therapy with the broad spectrum cephalosporin was

carried out. The patient was discharged home on day 6 after delivery in satisfactory condition together with the child.

Conclusion

Owing to outpatient observation, the patient was able to avoid serious nosocomial infectious complications.

Thus, the outpatient management of patients with premature rupture of membranes is found to be an acceptable option in the case of the pregnant woman and fetus stable state.

References

1. Makarov OV, Kozlov PV, Ivannikov N Yu, Kuznetsov PA, Bagaeva II (2014) Premature rupture of membranes: Etiology, perinatal pathology, suppurative-septic complications. *Voprosy ginekologii, Akusherstva i perinatologii* 13: 42-48.
2. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, et al. (2014) *Williams Obstetrics*. (24th edn), McGraw-Hill, 1376.
3. Goldenberg RL, Culhane JF, Iams JD, Romero R (2008) Epidemiology and causes of preterm birth. *Lancet* 371: 75-84.
4. CS Buhimschi, IA Buhimschi, ER Norwitz, AK Sfakianaki, B Hamar, et al. (2005) Sonographic myometrial thickness predicts the latency interval of women with preterm premature rupture of the membranes and oligohydramnios. *American Journal of Obstetrics and Gynecology* 193: 762-770.
5. YW Han, T Shen, P Chung, IA Buhimschi, CS Buhimschi (2008) Uncultivated bacteria as etiologic agents of intra-amniotic inflammation leading to preterm birth. *J Clin Microbiol* 47: 38-47.
6. Carlan SJ, O'Brien WF, Parsons MT, Lense JJ (1993) Preterm premature rupture of membranes: A randomized study of home vs hospital management. *Obstet Gynecol* 81: 61-64.
7. Abou El Senoun G, Dowswell T, Mousa HA (2014) Planned home versus hospital care for preterm prelabour rupture of the membranes (PPROM) prior to 37 weeks gestation. *Cochrane Database Syst Rev*.
8. Kozlov PV, Makarov OV, Volodin NN (2012) Premature pregnancy complicated by preterm rupture of membranes. MAI-print, Moscow, 133.
9. GM Saveleva, GT Sukhikh, VN Serov, VE Radzinsky (2015) *Akusherstvo: Natsionalnoe rukovodstvo*. GEOTAR-Media Publ, Moscow, 1088.
10. Dotters-Katz SK, Panzer A, Grace MR, Smid MC, Keku JA, et al. (2017) Maternal morbidity after prelabour rupture of membranes. *Obstetrics and Gynecology* 129: 101-106.