



## Clinical Observation of 84 Days Delayed Delivery of the Second Fetus in Twin Pregnancy

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### Abstract

Perinatal morbidity and mortality in preterm labor is significantly higher than in on-term delivery. The share of preterm infants accounts for approximately 70% of all cases of early neonatal mortality. One of the most important independent risk factors for preterm birth is multiple pregnancy. The risk of delivery before 30, 32 and 34 weeks in twin pregnancy is about 4%, 8% and 16%, respectively [1]. In general, the frequency of preterm labor with twins is 6 times higher than in singleton pregnancies [2].

There has been increase in the percentage of pre-eclampsia, bleeding during pregnancy, perinatal morbidity and mortality, and preterm labor - generally in 7-10 times [3].

Unfortunately, no effective prevention of preterm birth in multiple pregnancies currently exists. Cochrane reviews show that betamimetics have no effect on the multiple pregnancies outcome [4,5]. Progesterone, excellent at reducing the risk of preterm birth in singleton pregnancies, in multiple pregnancies was also ineffective [6].

Besides, even the corticosteroids' effectiveness for prevention of fetal respiratory distress syndrome is not confirmed in multiple pregnancies [7].

All these facts make it necessary to find some new ways to reduce perinatal losses in multiple pregnancies. One of these methods is the delayed delivery of the second fetus in twin pregnancy. In most cases, the second fetus is born almost immediately after the first, but sometimes it is possible to stop the delivery after the birth of the first fetus. This tactic helps to improve the outcome for the second fetus, whose period of gestation at the moment of his birth is longer than the first ones. Arabin B and van Eyck J described the 17-year experience of pregnancy prolongation for the second fetus in twin pregnancy in one of the perinatal centers in the United States. During that period, an attempt to prolong the gestation for the second fetus was undertaken in 48 twin pregnancies. In 10 cases, the second fetus was born immediately after the first, 38 pregnancies for the second fetus were prolonged for 19 more days at average (in 1 case - for 107 more days). Wherein, if the first fetuses were born before 25 weeks of gestation, their survival rate was 0%, and the second fetuses - 50%. If the first fetuses were born after 25 weeks of gestation, their survival rate was 65%, while the second ones - 95%. Thus, the proposed method significantly increases the survival chances of at least one of the twins [8]. At the same time, there is no clearly defined tactics of management after the delivery of the first fetus, and different centers are practicing various methods, from watchful waiting to a cervical cerclage [9].

### Keywords

Cervical incompetence, Delayed delivery, Multiple pregnancy, Preterm labor

### Case Report

Patient G, 30-years-old. The somatic anamnesis - not burdened. Gynecological history unremarkable. Regular menstruation, menstrual cycle length is 28 days, moderate. Current pregnancy is the 1<sup>st</sup> for this patient, spontaneous, bichorial twins. The first trimester of current pregnancy was uneventful.

At a gestation term of 19-20 weeks, the patient noticed liquid discharge from the genital tract and decided to call the ambulance. She was taken to hospital, the one of the department's clinical bases, with a diagnosis of "19-20 weeks bichorial biamniotic twin pregnancy, cervical incompetence, amniotic sac prolapse, premature rupture of the 1<sup>st</sup> fetus' membranes". The patient was hospitalized in the department of pathology of pregnancy, where, considering her insistence, tocolytic (Hexoprenaline) and antibiotic (Cefazoline) therapy was prescribed. Despite all the efforts in the term 20-21 weeks of gestation, spontaneous abortion of dead male fetus, weighing 358 grams, 26 cm length, occurred. After the birth of the first fetus, acute tocolysis with Hexoprenaline was administered to the patient, with a help of speculum the umbilical cord was cut as high as possible and treated with Chlorhexidine. Neither placenta nor membranes of the first fetus delivered from the uterus. Following ultrasound investigation showed that the second fetus was in a transverse position, fetal heart rate - clear and regular.

During the following 4 hours the patient was under the observation in the maternity unit. In respect that there was no bleeding from the genital tract or any contractions, and the patient's condition was satisfying; it was decided to transfer her to the Department of Pathology of pregnancy. Dynamic monitoring of full blood count showed neither leukocytosis nor positive procalcitonin test. Magnesium sulphate (dose of 60.0 ml 25% solution, during 3 days) and micronized progesterone (dose of 200 mg per day) therapy was administered.

Five days later, according to the positive effect of tocolytic therapy,

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the second fetus' satisfactory status and the absence of systemic inflammatory response symptoms, the patient was performed a surgical correction of cervical incompetence by imposing a U-shaped seam on the cervix. Postoperative period had no complications. 14 days after the operation the patient was discharged home. No abnormalities during the further period of current pregnancy were noticed. An ultrasound investigation was produced at 27<sup>th</sup> and 31<sup>st</sup> weeks of gestation produced: no fetal abnormalities were detected, Doppler flow indices were within the normal range. There were no variations in the parameters of a hemostasiogram or full blood count.

At 32 weeks of pregnancy, or 84 days of an intergenetic period, preterm amniotic fluid leak occurred. The patient was hospitalized with a diagnosis of "32 weeks of pregnancy, breech fetus position, preterm rupture of amniotic membranes, cervical incompetence (surgical correction), burdened obstetric anamnesis, antenatal death of the first twin fetus in 19-20 weeks of gestation". Considering the breech fetus position and term of gestation, it was decided to perform an operative delivery. By a cesarean section operation a premature live male fetus, weighing 2230 grams, 43 cm length, Apgar score 6-7. Placenta of the first fetus looked like a shapeless clot. The postoperative period was uneventful. The mother was discharged home 5 days after the surgery. The child was hospitalized at the neonatal intensive care unit with a diagnosis of "Respiratory distress syndrome", within 8 days he required a respiratory support with a nasal CPAP, spontaneous breathing afterwards. On the 12<sup>th</sup> day, the child was transferred to the second phase of nursing. Discharged home in satisfactory condition 24 days after the birth.

## Conclusion

We believe that the foresaid method is rational and advisable. It is one of the main ways of reducing perinatal morbidity and mortality. In case of the first fetus's delivery before the term of 22 weeks of gestation, we believe, it is possible and appropriate to impose the seam on cervix.

## Disclaimers

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