



PROLONGED LATENCY FOLLOWING PREVIALBLE PPROM AT 12 WEEKS WITH SUCCESSFUL PREGNANCY OUTCOME AT 34 WEEKS: A RARE CASE REPORT

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ABSTRACT

Background: Previaible preterm prelabor rupture of membranes (PPROM) occurring in the first or early second trimester is an uncommon obstetric condition associated with significant maternal and fetal morbidity. Prolonged continuation of pregnancy following membrane rupture at such an early gestational age is unusual. We report a case of PPROM at approximately 12 weeks of gestation in which pregnancy was successfully prolonged to 34 weeks with a favorable immediate neonatal outcome. **Case Presentation:** A 29-year-old G2A1 woman presented during early pregnancy. Her previous pregnancy had ended in spontaneous abortion at 7–8 weeks. Ultrasonography revealed a 5 × 4 × 3 cm intramural fibroid and a 37 × 29 mm subchorionic hemorrhage. At approximately 12 weeks, she developed spontaneous leakage of fluid per vaginum. Clinical assessment was suggestive of frank membrane rupture, and ultrasonography showed markedly reduced liquor. After counseling, expectant management was undertaken with close maternal and fetal surveillance. She received individualized supportive and pharmacological management including micronized progesterone, dydrogesterone, hydroxyprogesterone acetate, L-arginine preparations, low-dose aspirin, nutritional support, hydration and rest. Urine cultures were performed approximately every two weeks and antimicrobial therapy was modified according to culture findings. Serial ultrasonography demonstrated persistently low liquor, while cervical length remained adequate and the uterus remained relaxed. Antenatal corticosteroids were administered at 26 weeks. Pregnancy continued until 34 weeks, giving an approximate latency period of 22 weeks. At 34 weeks, she presented in labor with transverse lie and anhydramnios and underwent cesarean delivery. A 1.8-kg baby was delivered and required NICU admission only for observation. **Conclusion:** This case demonstrates an exceptionally prolonged latency period following previable PPROM at 12 weeks. Despite persistent oligohydramnios/anhydramnios and associated pregnancy complications, pregnancy was successfully prolonged to 34 weeks with a favorable immediate neonatal outcome.

KEYWORDS : Previaible PPROM; prolonged latency; oligohydramnios; anhydramnios; intramural fibroid; pregnancy outcome.

INTRODUCTION:

Preterm prelabor rupture of membranes (PPROM) is an important cause of preterm birth. When rupture occurs before the gestational age at which neonatal survival is generally considered feasible, it is termed previable PPROM. Such pregnancies pose difficult management decisions because prolonged rupture may be associated with maternal infection, placental abruption, fetal growth abnormalities, pulmonary hypoplasia and neonatal morbidity.

ling regarding expectant management versus termination, taking into account gestational age, maternal condition, fetal status and the patient's preferences.

We report an unusual case of spontaneous membrane rupture at approximately 12 weeks followed by a latency period of approximately 22 weeks and delivery at 34 weeks with a favorable immediate neonatal outcome.

Case Presentation: A 29-year-old woman, G2A1, working as a software engineer, presented during early pregnancy for

Current recommendations emphasize individualized counsel-

antenatal care. Her previous pregnancy had ended in spontaneous abortion at 7–8 weeks of gestation.

Early pregnancy ultrasonography revealed a single intrauterine pregnancy with a $5 \times 4 \times 3$ cm intramural uterine fibroid and a 37×29 mm subchorionic hemorrhage.

At approximately 12 weeks of gestation, the patient developed spontaneous leakage of fluid per vaginum. Clinical examination was suggestive of frank rupture of membranes. Ultrasonography demonstrated very scanty liquor. Following detailed counseling regarding the potential maternal and fetal risks, she was admitted for expectant management.

Management included close clinical and ultrasonographic surveillance, nutritional optimization, hydration and rest. Individualized pharmacological therapy consisted of oral micronized progesterone, oral dydrogesterone, weekly injectable hydroxyprogesterone acetate, L-arginine in different formulations and low-dose aspirin (Ecosprin 150 mg). Amniocentesis was also administered as part of the treating team's individualized management strategy.

Urine cultures were performed approximately every two weeks, and antimicrobial therapy was modified according to culture results. Serial ultrasonography consistently showed low amniotic fluid volume. Despite prolonged oligohydramnios, the uterus remained relaxed and cervical length remained adequate on serial examinations. There was no documented clinical deterioration requiring termination of pregnancy during the previable period.

Antenatal corticosteroids were administered at 26 weeks because of the anticipated risk of preterm delivery. Pregnancy continued successfully until 34 weeks, resulting in an estimated latency period of approximately 22 weeks following membrane rupture.

At 34 weeks, the patient presented in labor. The fetus was in transverse lie with anhydramnios. In view of the obstetric indications, cesarean delivery was performed. A baby weighing 1.8 kg was delivered. The neonate required NICU admission for observation and, according to the available clinical information, did not require prolonged intensive neonatal intervention. The immediate maternal and neonatal outcomes were favorable.

DISCUSSION:

The most unusual feature of this case is the exceptionally prolonged latency period of approximately 22 weeks following membrane rupture at only 12 weeks of gestation. Prevalable PPROM is associated with substantial risks, particularly intrauterine infection, placental complications, pulmonary hypoplasia and severe prematurity.

In this case, pregnancy continued despite persistent oligohydramnios and later anhydramnios. Serial assessment showed an adequate cervical length and a relaxed uterus throughout the prolonged period of observation. The absence of documented clinical deterioration allowed continuation of pregnancy to a gestational age at which neonatal survival is substantially more likely.

The coexistence of an intramural fibroid and subchorionic hemorrhage represents additional noteworthy features, although their contribution to the membrane rupture or prolonged latency cannot be established.

Several pharmacological and supportive interventions were used during management. However, because this is a single case, no causal relationship can be established between any individual treatment and the prolonged latency period. In particular, therapies such as progesterone, L-arginine and

Amniocentesis should be regarded as components of the individualized treatment strategy rather than established therapies for prolonging pregnancy after previable PPROM. Current SMFM guidance considers interventions such as amniocentesis and amniopatch investigational rather than routine treatment.

Administration of antenatal corticosteroids at 26 weeks was consistent with established practice for pregnancies at risk of preterm birth. The eventual cesarean delivery was performed for obstetric indications—transverse lie with anhydramnios and labor—rather than solely because of the previous PPROM.

The birth weight of 1.8 kg at 34 weeks and requirement for only observational NICU care represent a favorable immediate neonatal outcome and make this clinical course particularly noteworthy.

CONCLUSION:

This case illustrates an exceptionally prolonged latency period following previable PPROM at approximately 12 weeks of gestation. Despite persistent oligohydramnios/ anhydramnios, an intramural fibroid and subchorionic hemorrhage, pregnancy was successfully prolonged for approximately 22 weeks until 34 weeks, resulting in delivery of a 1.8-kg neonate with a favorable immediate outcome.

The case highlights the possibility of prolonged pregnancy following very early PPROM in carefully selected patients undergoing individualized counseling and close maternal–fetal surveillance. However, management remains complex and must be individualized because of the substantial maternal and fetal risks associated with prolonged membrane rupture.