International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Tandulwadkar S et al. Int J Reprod Contracept Obstet Gynecol. 2024 Mar;13(3):750-752
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20240492

Case Report

Expectantly managed previable preterm PROM in an IVF conceived DCDA twin pregnancy: first case of longest extended latency in India

Sunita Tandulwadkar, Sneha Mishra*, Swapnil Langde

Department of IVF and Endoscopy, Ruby Hall Clinic, Pune, Maharashtra, India

Received: 05 January 2024
Revised: 08 February 2024
Accepted: 09 February 2024

***Correspondence:**
Dr. Sneha Mishra,
E-mail: snehamishra1310@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Previable preterm premature rupture of membranes (PPROM) between 14 and 24 weeks of gestation complicates < 1% of pregnancies. Previable PPROM in dichorionic diamniotic (DCDA) twin pregnancies are even rarer, and there is no consensus in the literature on outcomes and management due to scarcity of reports. With the recent advances in obstetrics and neonatal care, expectant management is a ray of hope for such precious pregnancies. We presented a case report of a 27 years old lady with previous two abortions with an IVF conceived DCDA twin pregnancy. We were able to extend the latency period by 95 days with our expectant management with favourable outcomes both mother and the baby. To the best of our knowledge, this is the longest case of successful expectant management of IVF conceived twins with PV-PPROM reported in India.

Keywords: PPROM, Expectant management, IVF conceived, Latency, Twins

INTRODUCTION

Previable preterm premature rupture of membranes (PPROM) between 14 and 24 weeks of gestation complicates <1% of pregnancies. Complications resulting from this condition are significant and include chorioamnionitis, fetal loss, endometritis, pulmonary hypoplasia, respiratory distress syndrome (RDS), intraventricular hemorrhage (IVH), necrotizing enterocolitis (NEC), limb and joint deformities, and complications of extreme prematurity with major and minor impairments among surviving infants.[1] Recent advances in obstetric and neonatal care with the use of antibiotics, antenatal steroids and surfactant have improved outcomes. Previable PPROM in dichorionic diamniotic (DCDA) twin pregnancies are even rarer, and there is no consensus in the literature on outcomes and management due to scarcity of reports.

Management options include either termination of pregnancy (TOP), selective termination of fetus with ruptured sac, or expectant management. Though termination of pregnancy is the safest option for mother to prevent chorioamnionitis and sepsis, it might not be acceptable option for women with IVF conceived pregnancies due to social and emotional factors. With the recent advances in obstetrics and neonatal care, expectant management is a ray of hope for such precious pregnancies.

We present a case report of a 27 years old lady with previous two abortions with an IVF conceived DCDA twin pregnancy. The patient had previable preterm PROM at 16+ 3 weeks of gestation and was managed expectantly with antibiotics, rest, steroids and MgSo4 for fetus. She underwent emergency lower transverse caesarean section and delivered babies weighing 1.36 and 1.64 kg. The babies required NICU admission were but discharged after stabilization. We were able to extend the latency period by 95 days with our expectant management with favourable outcomes both mother and the baby. To the best of our knowledge, this is the longest case of successful expectant

management of IVF conceived twins with PV-PPROM reported in India.

CASE REPORT

We presented case of a 27 yrs old lady married since 5 yrs with IVF conceived Twin pregnancy in view of unexplained infertility. She presented at 16 weeks 3 days of gestation with complains of leaking of blood mixed vaginal discharge per vaginum. She had history of previous 2 abortions.

First was a missed abortion 4 years back at 8 weeks which was spontaneously conceived. The second was an IVF conceived pregnancy with missed abortion at 8 weeks which was medically managed. The patient was a known case of chronic hypertension on labetalol and Hypothyroidism on levothyroxine supplementation. She had no other significant medical or surgical history. On admission the WBC count was 10980/cumm, CRP was 1.5 and scan showed a live twin intrauterine gestation. An abdominal ultrasound scan revealed live twin DCDA pregnancies with DVP (deepest vertical pocket) of 37 mm in twin A and 42 mm in twin B.

The patient was advised rest and started on IV antibiotics emperically. High vaginal Swab sent was suggestive of *E. Coli* and patient was started on tazobactam based on culture sensitivity reports for 5 days. Patient was admitted in view of high risk IVF conceived twin pregnancy and was advised rest and monitoring. She was given steroid for fetal lung maturity. Repeat HVS showed only presence of occasional gram positive bacilli. Latency antibiotics in the form of amoxycillin 500 mg TDS was given for 5 days. During this time, the patient experienced no abdominal discomfort, odorous discharge, or other signs of infection. Abdominal ultrasounds revealed similar findings as before with a finding of live twin pregnancies. The blood pressure was maintained in the normal range throughout admission period.

Patient had another episode of leaking around 24 weeks. Scan showed DVP of only 1.5 cm in twin A and 1.8 cm in twin B but fetal growth was adequate. After extensive counselling, patient opted for conservative management with constant monitoring for signs of any infection. She was advised rest and monitored with WBC count, CRP levels, HVS and serial scan to see for growth and liquor. A repeat dose of betamethasone was given for lung maturity and MgSo4 was given for neuroprotection. She developed contractions at 30+0 weeks period of gestation and an emergency caesarean section was done in view of preterm labor pains. Twin 1 was male baby of 1.36 kg with Apgar 9, 10 at 1 and 5 minutes and twin 2 was 1.6 kg with Apgar of 4, 8 . Both the babies were admitted in NICU and received surfactant and required initial ventilatory support followed by CPAP and then oxygen by nasal cannula. Feeds were initially given by orogastric tubes according to weight which was weaned off to breastfeeding. Both the babies had zone 1/2 retinopathy of prematurity and required follow up. On discharge, both the babies were on breastfeeding and maintain oxygen at room air.

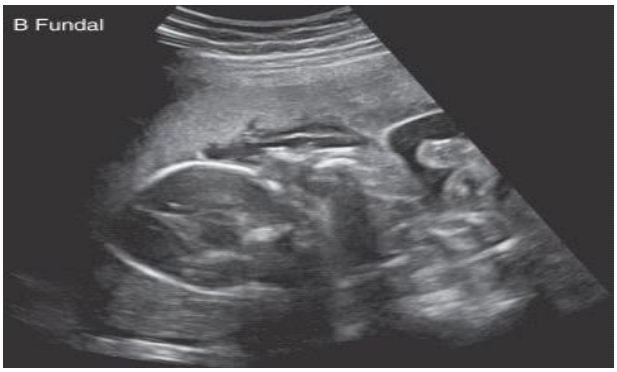

Figure 1: Oligohydramnios in the fetus.

DISCUSSION

A case of previable preterm PROM at 16+3 weeks of gestation was expectantly managed with antibiotics, streroids and mgSo4 with favourable outcomes for the mother and baby. The latency period was extended upto 95 days without can evidence of infection or increase in blood pressure of the patient. In a retrospective cohort study of 59,935 deliveries, the mean latency period was 3.3 days in women presenting at 30 to 33 weeks and 14.6 days in those presenting at 23 to 26 weeks.[2] The majority of patients will deliver within one week when preterm PROM occurs before 24 weeks' gestation, with an average latency period of six days.[3]

Many infants who are delivered after previable rupture of the fetal membranes suffer from numerous long-term problems including chronic lung disease, developmental and neurologic abnormalities, hydrocephalus, and cerebral palsy. Previable rupture of membranes also can lead to Potter's syndrome, which results in pressure deformities of the limbs and face and pulmonary hypoplasia. The incidence of this syndrome is related to the gestational age at which rupture occurs and to the level of oligohydramnios. Fifty percent of infants with rupture at 19 weeks' gestation or earlier are affected by Potter's syndrome, whereas 25 percent born at 22 weeks' and 10 percent after 26 weeks' gestation are affected.[4] In a retrospective study of multifetal pregnancies with PV-PPROM, overall neonatal survival at discharge was 43%, and only 17% survived without significant neonatal morbidity.[5] The risk of fetal death appears to be inversely related to the gestational age at PROM. All fetal deaths in one series of studies occurred in pregnancies with MVP less than 2 cm.[6] Patients should be counselled about the outcomes and benefits and risks of expectant management and should always be offered alternative options.

CONCLUSION

We presented a case of expectant management of previable preterm PROM in a twin IVF conceived pregnancy with

favourable outcomes for the mother and the babies. Although one case is insufficient to make recommendations, it highlights the need for further research regarding PV PROM in IVF conceived twin pregnancies.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Waters TP, Mercer BM. The management of preterm premature rupture of the membranes near the limit of fetal viability. Am J Obstet Gynecol. 2009;201(3):230-40.
2. Wertheimer A, Ashwal E, Fraiman-Hakerem N. Predicators for short latency period to delivery in p-PROM at less than 34 weeks of gestation. Am J Obstet Gynecol. 2017;216:0.
3. Mercer BM. Preterm premature rupture of the membranes. Obstet Gynecol. 2003;101(1):178-93.
4. Rotschild A, Ling EW, Puterman ML, Farquharson D. Neonatal outcome after prolonged preterm rupture of the membranes. Am J Obstet Gynecol. 1990;162(1):46-52.
5. Major CA, Kitzmiller JL. Perinatal survival with expectant management of midtrimester rupture of membranes. Am J Obstet Gynecol. 1990;163(3):838-44.
6. Vergani P, Ghidini A, Locatelli A, Cavallone M, Ciarla I, Cappellini A, et al. Risk factors for pulmonary hypoplasia in second-trimester premature rupture of membranes. Am J Obstet Gynecol. 1994;170(5 Pt 1):1359-64.

Cite this article as: Tandulwadkar S, Mishra S, Langde S. Expectantly managed previable preterm PROM in an IVF conceived DCDA twin pregnancy: first case of longest extended latency in India. Int J Reprod Contracept Obstet Gynecol 2024;13:750-2.