

## TRAGIC OUTCOME OF PRETERM IVF TWIN PREGNANCY: A CASE REPORT

Phr. Deepa Kumari Karn\*

Council for Technical Education and Vocational Training.

*Article Received: 14 December 2024 | Article Revised: 05 January 2025 | Article Accepted: 27 January 2025*

**\*Corresponding Author: Phr. Deepa Kumari Karn**

Council for Technical Education and Vocational Training.

**Orchid Id:** 0009-0001-1880-9380 **DOI:** <https://doi.org/10.5281/zenodo.14787182>

**How to cite this Article:** Phr. Deepa Kumari Karn (2025). TRAGIC OUTCOME OF PRETERM IVF TWIN PREGNANCY: A CASE REPORT. World Journal of Pharmaceutical Science and Research, 4(1), 444-446. <https://doi.org/10.5281/zenodo.14787182>



Copyright © 2025 Phr. Deepa Kumari Karn | World Journal of Pharmaceutical Science and Research.

This work is licensed under creative Commons Attribution-NonCommercial 4.0 International license (CC BY-NC 4.0)

### ABSTRACT

**Background:** In vitro fertilization (IVF) has revolutionized reproductive medicine, offering hope to couples struggling with infertility but the premature rupture of membrane is critical condition in IVF twins pregnancy, with limited study done. **Case presentation:** The patient experienced premature rupture of membranes (PROM) at 30 weeks gestation. Upon arrival at the hospital, her cervical os was closed. Given the gestational age and the risk of preterm delivery, the medical team initiated a course of antenatal corticosteroids to promote fetal lung maturity. **Conclusion:** This case highlights the importance of intervention and developing strategies for preventing PROM in high-risk pregnancies.

**KEYWORDS:** In vitro fertilization, Premature rupture of membrane, Preterm delivery, High risk pregnancy.

### INTRODUCTION

In vitro fertilization (IVF) has revolutionized reproductive medicine, offering hope to couples struggling with infertility.<sup>[1]</sup> However, IVF pregnancies, particularly those involving multiple gestations, carry increased risks of complications.<sup>[2]</sup> Twin pregnancies resulting from IVF are at higher risk for preterm birth, which can lead to significant neonatal morbidity and mortality.<sup>[3]</sup> This case report focuses on an IVF twin pregnancy at 30 weeks gestation, highlighting the challenges and potential outcomes associated with preterm delivery in multiple gestations.

### Patient Description

The patient is a 31-year-old female who conceived twins through IVF. She had no significant medical history prior to this pregnancy.

**Case Description**

The patient experienced premature rupture of membranes (PROM) at 30 weeks gestation. Upon arrival at the hospital, her cervical os was closed. Given the gestational age and the risk of preterm delivery, the medical team initiated a course of antenatal corticosteroids to promote fetal lung maturity.

**Clinical Findings**

The patient's cervix was closed upon initial examination, indicating that immediate delivery was not necessary. However, due to the PROM and the risk of infection, close monitoring was required.

**Timeline**

Day 1: Patient presented with PROM at 30 weeks gestation

Days 1-2: Administration of three doses of dexamethasone at 8-hour intervals

Day 2: Cesarean section performed

Days 2-21: Neonatal intensive care unit (NICU) care for both twins

Day 6: Twin 1 demised

Day 23: Twin 2 demised

**Diagnostic Assessment**

The diagnosis of PROM was made based on the patient's symptoms and clinical examination. The decision for cesarean section was likely based on factors such as fetal positioning, maternal health, and the potential risks of vaginal delivery in this preterm twin pregnancy.

**Therapeutic Intervention**

The patient received three doses of dexamethasone at 8-hour intervals to promote fetal lung maturity. A cesarean section was performed to deliver the twins. Post-delivery, both neonates were admitted to the NICU, where they received surfactant therapy and antibiotic treatment. Ventilatory support, including CPAP and mechanical ventilation, was provided as needed.

**Follow-up and Outcomes**

Both neonates required intensive care in the NICU. Attempts to initiate enteral feeding with breast milk (1-2 ml) began on day 16 post-delivery but were discontinued after two days. Despite aggressive medical interventions, Twin 1 demised on day 4 of life, and Twin 2 demised on day 21.

**DISCUSSION**

This case highlights the significant risks associated with preterm delivery in IVF twin pregnancies. Despite appropriate antenatal corticosteroid administration and intensive neonatal care, including surfactant therapy and ventilatory support, both neonates ultimately succumbed to complications of extreme prematurity. The case underscores the importance of close monitoring and management of high-risk pregnancies, as well as the need for advanced neonatal care facilities in managing extremely preterm infants.

**CONCLUSION**

Preterm delivery in IVF twin pregnancies presents substantial challenges and risks. It serves as a reminder of the potential risks associated with multiple pregnancies and the challenges in managing extremely premature infants.

Further research is needed to improve outcomes for premature infants and to develop strategies for preventing PROM in high-risk pregnancies. While advances in neonatal care have improved outcomes for many preterm infants, extremely premature neonates still face significant mortality risks. This case emphasizes the need for continued research and improvements in the management of high-risk pregnancies and care of extremely preterm infants.

#### **REFERENCES**

1. American Society for Reproductive Medicine (ASRM). In vitro fertilization (IVF): Frequently asked questions [Internet]. Birmingham (AL): ASRM; [cited 2025 Jan 16]
2. American College of Obstetricians and Gynecologists (ACOG). Complications of multiple gestation: clinical management guidelines. *Obstet Gynecol*, 2016; 127(4): e156–64.
3. Practice Committee of the American Society for Reproductive Medicine. Multiple gestation associated with infertility therapy: an American Society for Reproductive Medicine Practice Committee opinion. *Fertil Steril*, 2012; 97(4): 825-34.