Case Report: Obstetrics

A Case of Live Birth after Delayed Interval Delivery of Second Twin: An Unusual Case Scenario

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Abstract

Delayed interval delivery in multifetal pregnancy is infrequent. It can be beneficial for the second twin but at the same time critical for the mother and challenging for obstetrician. This case report is about the latency interval of 10 days after delivery of the first twin. The case high lights the feasibility of this option to prolong pregnancy duration for 2nd twin with careful monitoring.

Key word: Delayed Delivery, Interval, Monitoring, Second twin.

Introduction

Rates of multifetal pregnancies are increasing notably due to the shoot up in cases of in vitro fertilization. Multifetal pregnancies are often at risk for spontaneous preterm delivery, leading to extreme prematurity in newborns and causing increase in morbidity and mortality. Usually, delivery of a second fetus occurs shortly after preterm delivery of the presenting fetus. Delayed interval delivery is characterized by unusually postponing labor after the birth of the first fetus allowing the remaining fetus to stay in utero until reaching viability. This improves survival and reduces morbidity.[1,2] For the prolongation of delivery interval that is critical for the improvement of perinatal outcome of second twin, there is still study going on whether cervical cerclage or other conservative approach is the superior method of treatment.[2] There are several case studies for delayed interval delivery of the second twin, but data form previous studies are conflicting and there is no widely accepted protocol available so far. In addition, it is also not clear if this interval delivery is associated with an improved long-term outcome of the second twin.

The purpose of reporting this case is to keep the option of delayed interval delivery open in selected cases to improve the maturity of the fetus.

Case report

25 year old primigravida with 25 weeks 1 day gestation, IVF conceived twin pregnancy came with complaints of lower abdomen pain and backache for one day. She had h/o 3 embryo transferred in IVF cycle due to male factor infertility. Subsequently she underwent fetal reduction to di-chorionic di-amniotic twin at 11 week of gestation (fig 1).

She came as an unbooked case to the hospital in emergency. At admission she was normotensive, afebrile and in early labour. Her Hb was 10.5 gm/

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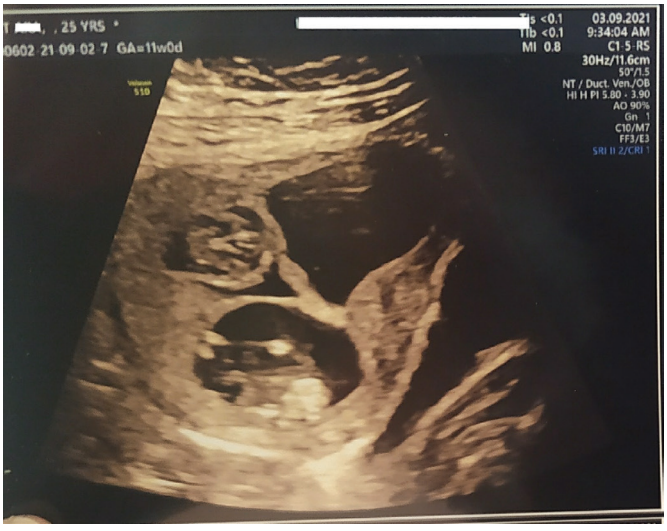

Figure. 1: USG after fetal reduction and before preterm delivery

dl, TLC 16300/mm3, viral markers and coagulation profile were normal, SGPT 153 U/L, RBS 129 mg%, covid 19 rapid antigen test was negative and blood group was B Positive. She had spontaneous expulsion of a dead 250 grams male fetus within 2 hours of admission. She was observed for delivery of 2nd twin, but uterine contraction had ceased, placenta was retained in utero, cervical os retracted. Cord was tied high up in the cervix. Urgent scan was done which revealed a single alive fetus of 25 weeks 6 days in breech presentation with adequate liquor, with baby weight 858 grams (fig 2). She was planned for expectant management.

High vaginal swab and urine culture were sent. She was started on intravenous Ceftriaxone & Metronidazole. She was counseled regarding the risk of complications such as sepsis and thromboembolism. She was well explained about preterm labor, PPROM, risk of prematurity. After taking consent, conservative treatment was started with corticosteroids for lung maturity, MgSO4 for neuroprotection. Injection hydroxyprogesterone caproate and dydrogesterone was given. Patient was followed up through clinical assessment, lab tests, daily fetal kick count and weekly USG.

Her leukocyte counts after 48 hours of antibiotics were 10,700/mm3. Her urine culture showed E.coli (ESBL). Treatment was initiated. USG was repeated after a week which showed a single viable fetus of 26 week 2 days in breech presentation, cervical os was partially open with cervical length 3.8 cm. She complained of backache & vaginal discharge on Day 9. On the 10th day she had onset of spontaneous preterm labor. She was explained the risk benefit of vaginal versus cesarean delivery. Assisted breech

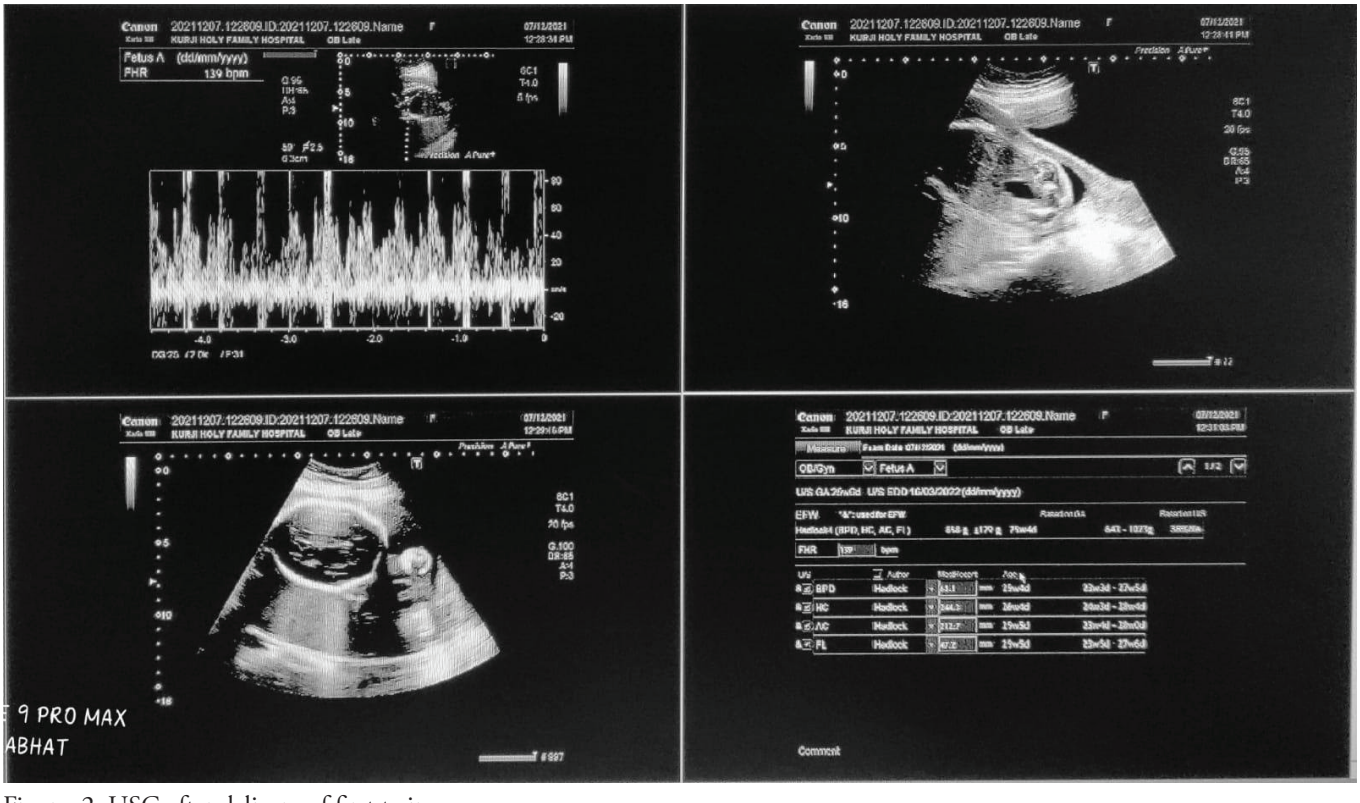

Figure. 2: USG after delivery of first twin

delivery was conducted and a live preterm male baby of 915 grams was delivered. Two placentas were removed manually, one normal looking but in pieces and other with a thin cord and dried, dessicated look. The APGAR of baby at 1 minute and 5 minutes were 4 and 9 respectively. Baby was shifted to the NICU for further care. Mother was observed for 48 hours post-delivery. There were no clinical signs of infection and was discharged from hospital. The baby however suffered from RDS in spite of surfactant and ventilatory support and succumbed on Day 8 of birth.

Discussion

There are numerous papers published on delayed delivery of second twin but due to rarity of the condition there is no universal protocol or gold standards for treatment available so far. Extreme prematurity at birth has very less chances of survival of a healthy new born without any major sequelae. Many case reports are available emphasizing that delay in delivery of second twin after preterm birth of the presenting twin can be advantageous for undelivered fetus and can significantly prolong the gestation thereby improving survival and long-term outcome.

In this study, patient selection for delayed interval delivery is based on the fact that it was di-chorionic di-amniotic twin with intact membrane. There were no clinical signs of infection at the time of birth of first twin. The gestational age at delivery of first twin was 25 weeks 1 day. Delaying delivery after reaching viability gives opportunity for active management in extremely premature newborns. Similar study was done by Arabin and Van Eyck [2009] on 93 twins and 34 triplets that qualified for delayed interval delivery in a single centre during 17 year period and reported better outcomes when the deliveries of first twin occurred beyond 25 weeks as compared to that occurred before 25 weeks gestation.[3]

The patient was started on broad spectrum antibiotic prophylaxis, steroid for fetal lung maturity, patient's vitals were monitored regularly and required laboratory investigations were done. Tocolysis and cervical cerclage was not tried in this patient. Sharma R and Dadu R in their case report have suggested to consider elective cerclage if delivery of first twin occurred before 23 weeks.[4] However, Benito et al. concluded cervical cerclage was not contributive to the improvement of pregnancy outcomes in delayed interval delivery.[1] Nan Yu and colleagues conducted a retrospective study of delayed interval delivery cases at their centre and concluded that cervical cerclage after delivery of first twin is associated with longer inter delivery interval without increasing the risk of intrauterine infecting.[5] According to some reports, routine tocolysis should be used prophylactically.[6,7] However, Weemhoff et al; 2001[8] recommended only therapeutic use of tocolysis. In this case tocolysis therapy was not used because uterine contraction ceased immediately after birth of first twin.

This case probably was not the best case for the success of delayed interval delivery. There has already been intervention by way of fetal reduction. UTI also may have accelerated the early delivery. With the available resources and facilities at our centre, the latency interval of 2nd twin was prolonged by 10 days. Mortality of extremely premature could not be prevented eventually. Puerperium was uneventful and at the time of discharge mother was healthy showing no clinical and biochemical signs of infection.

Compliance with Ethical Standards Conflict of interest

The authors declare that they have no conflicts of interest.

Abbreviations:

H/O – History of
IVF – In vitro fertilization
USG – Ultrasonography
PPROM – Preterm premature rupture of membranes
NICU – Newborn intensive care unit
UTI – Urinary tract infection
ESBL – Extended spectrum beta lactamase

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