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Research Article

DELAYED INTERVAL DELIVERY OF A SECOND TWIN AT TERM FOLLOWING LOSS OF THE FIRST TWIN AT 15 WEEKS: A CASE REPORT AND REVIEW OF THE LITERATURE

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Abstract

Gestational age at delivery is a critical factor influencing neonatal survival, with prematurity being a major contributor to increased neonatal morbidity and mortality. Twin pregnancies are particularly prone to preterm deliveries, and the second twin is generally expected to follow shortly after the first twin's delivery. However, in certain cases, a delayed delivery of the second twin following the loss of the first twin can be considered, with some successful outcomes reported. This case report highlights a rare instance of a delayed interval delivery, wherein the second twin was carried to term following the spontaneous abortion of the first twin at 15 weeks gestational age. Cervical cerclage was performed as part of the management to prolong the pregnancy, resulting in the successful delivery of the second twin at term. This case contributes to the limited body of literature on successful delayed delivery of the second twin and underscores the potential for positive outcomes even in complex and high-risk scenarios. The management approach and outcome offer valuable insights into the possibilities of prolonging pregnancy in cases of twin loss and the potential role of cervical cerclage in achieving a successful outcome.

Keywords: Delayed interval delivery, Twin pregnancy, Cervical cerclage, Neonatal survival, Gestational age

Introduction

Gestational age at delivery has been reported as a strong predictor of neonatal survival with prematurity carrying a significant risk of increased neonatal morbidity and mortality.[1] Twin pregnancies are associated with higher incidence of preterm deliveries and the delivery of the second twin is usually expected to follow soon after the

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delivery of the first twin. However, delayed delivery for the second baby following loss of first twin has been reported as an option of management with possible good outcome.[2] Cases of successful delayed delivery of the second twin following prolongation of pregnancy until term have been a rarity. We report a rare case of delayed interval delivery after application of cervical cerclage with subsequent prolongation of the second twin's delivery until term, achieved after a spontaneous abortion of first twin at 15 weeks gestational age.

CASE REPORT

A 40year old woman with dichorionic diamniotic twin pregnancy conceived via IVF. She booked for antenatal care at a gestational age of 13 weeks and was scheduled for cervical cerclage at 14 weeks but defaulted. However, at 15weeks 2days gestational age, she presented on account of severe lower abdominal pressure. Vaginal speculum examination showed a 3cm dilated cervix with obvious bleeding from the external os and bulging membrane. 2hours later, she expelled the leading twin with the placenta retained for which it was ligated with vicryl 0 close to the external os. The patient was commenced on salbutamol 4mg tds and dydrogesterone 10mg tds as tocolysis and amoxillicin clavulanic acid injection (antibiotics). The patient and relatives were counseled on the option and consequences of a delayed interval delivery after cervical cerclage which they accepted. She subsequently had a Triangular 3-Bites Cervical Stitch, [3] applied on the cervix after 2 days with the placenta retained inside the uterus. She was maintained on salbutamol infusions for tocolysis, augmentin was continued for the next 24hours to prevent intrauterine infections and she was closely monitored for 24hours and discharged home on tabs augmentin and metronidazole for 1 week, hematinics and oral tocolytics. She was counseled on the need for regular antenatal care visit at two weeks interval with ultrasound follow up and evaluation of clotting profile.

She was regular with her visits and was closely monitored. She had her clotting time/prothrombin time, packed cell volume and urinalysis checked at every visit including ultrasound and vaginal swab culture and sensitivity done on monthly basis. She was placed on low dose aspirin, salbutamol tablet and hematinics till delivery. She had no clinical or laboratory signs of infections at any point.

Pregnancy remained uneventful and she had her baby via an elective cesarean section at a gestational age of 37 weeks with good outcome, weight was 3kg. The placenta of the dead twin was noted to be small, old and necrotic whereas that of the viable twin was normal. The cervical ccerclage was removed intra-operative after delivery of the baby. Baby was transferred to mother in good condition.

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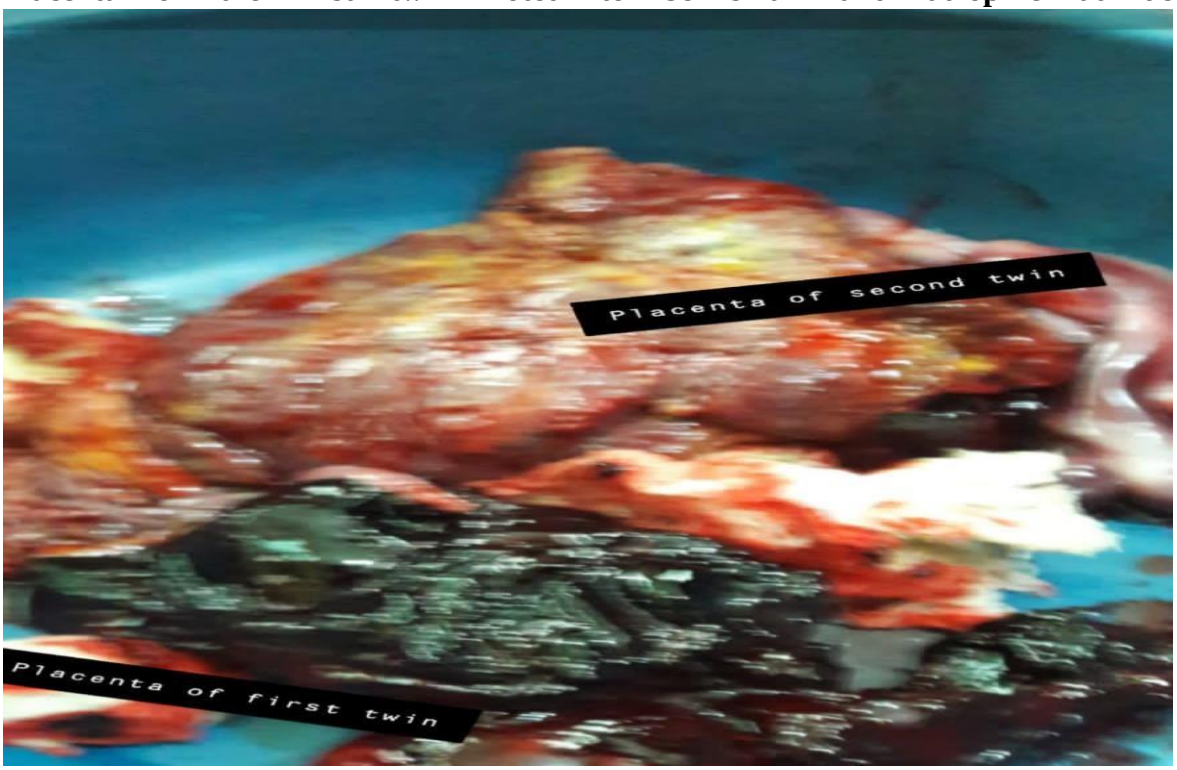
Placenta of the first twin noted to be small and atrophic at delivery



DISCUSSION

Twin pregnancies have been established to be associated with higher risk of preterm delivery than singletons and this carries significantly higher risk of morbidity and mortality.[1] The delivery of the second twin is routinely followed by the delivery of the second twin within a short interval either vaginally or by cesarean section. Delayed delivery after successful prolongation of gestational period with attendant increase in fetal weight in preterm cases for the second twin, significantly improve survival.[2]

Increased discussions and measures have been employed in recent years, in an attempt to prolong the pregnancy for the second twin after the first twin's delivery. A large number of cases with good results have been published. van Eyck et al,[4] in a prospective study, had obstetric follow-up of 50 cases of multiple pregnancies and reported that the delayed birth of the second twin is associated with reduced perinatal complications if the birth of the first twin happens between weeks 20 and 29. In a study of 35 patients, Fayad et al,[5] reported a mean interval of 47 days. A median duration of 6 days in a population of 200 pregnancies was reported by Benito Vielba et al.[2] Aydin and Celiloglu et al,[6] reported a case of delivery of an infant weighing 3639g delivered via cesarean section at 36 weeks' gestation with uneventful neonatal status after the first twin was delivered at 21weeks. Reports of varying

intervals of delayed interval delivery have been documented in literature but that beyond 36weeks seem relatively scarce.

Varying degrees of complications may arise from delayed interval delivery including chorioamnionitis, coagulation disorder from retained placenta, abruption placenta, preterm labour among others but there is no established management guideline or protocol.[5] Chorioamnionitis following ascending infection from the ligated cord of first twin appears to be the earliest and commonest complication.[5] Its prevention appears to be the key to successful outcome. Empiric broad spectrum antibiotics should be initiated immediately as part of patient follow up. Periodic cervical and vaginal culture should be sampled and antibiotics administration based on the antibiogram instituted until negative culture result is obtained as was done in our patient.

In delayed interval delivery, one of the most controversial issues in management is the application of cervical cerclage. While some authors are aversed to its use,[2,4,7] others found it important for a favourable outcome.[3,5,6] Generally, the application of cervical cerclage in twin and higher order pregnancies have remained controversial.[8] Its use have been recommended based on patient selection particularly when history based risk factors or ultrasound findings of cervical weakness are obtained[9,10] Our case suggests that patients need for cervical cercalge should be always individualized and patients` wish sort for. The couple gave consent for emergency cervical cerclage which helped to obtain a good outcome.

We simultaneously used two tocolytics in our patient initially with prolonged use of salbutamol only up till 34 weeks without adverse effect such as fetal tachycardia on the fetus as reported in literature. In our opinion, further studies are needed to gain knowledge in this regards.

We believe delayed interval delivery can be done after the delivery of the first twin with second twin carried to term to avoid challenges of fetal prematurity and its management especially in our environment where such services are not easily available.

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