Delayed Interval Delivery and Chorionicity

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ABSTRACT

Two multiple pregnancies with delayed delivery after expulsion of the first twin are presented. Case 1: A 37 years old woman with dichorionic diamniotic twin pregnancy and the first foetus was aborted at 16 weeks of gestation. She delivered a healthy male infant at 38 weeks of gestation (22 weeks after the delivery of the first twin). Case 2: A 31 years old monochorionic diamniotic twin pregnancy she aborted the first foetus at 19 weeks of gestation and was managed with cervical cerclage and delivered a healthy male infant at 38 weeks of gestation (19 weeks after the delivery of the first twin).

Based on our experience and the review of literature, delayed delivery with careful observation of foetal and maternal condition is recommended for improved survival and decreased morbidity among latter-born siblings.

Keywords: Multiple pregnancy, Delayed delivery, Selective delivery, Twins, Cervical cerclage

1. INTRODUCTION

The incidence of multiple pregnancies has increased since introduction of assisted reproductive techniques. Patients with multiple pregnancies are at risk of preterm labor and delivery with the associated high perinatal mortality and morbidity. Delivery of the initial foetus in a multiple gestation is usually followed by delivery of the subsequent foetus or foetuses shortly thereafter. It is rare to observe a prolonged interval between the delivery of the foetuses from a multiple pregnancy and to observe a survivor.

We report 2 cases of multiple gestations with successful delayed interval delivery of 22 and 19 weeks, respectively.

2. CASE REPORTS

Case 1
37 years old lady gravida 2 para 0 aborts 1, in-vitro fertilization dichorionic diamniotic twin pregnancy, at 15+6 weeks she presented to emergency complaining of lower abdominal pain and scanty vaginal discharge so speculum examination done and her cervical os was open 2 to 3 cm with umbilical cord protruding to the vagina there was no bleeding at that time she was admitted and started on ampicillin, erythromycin and gentamycin, on the next day pain increased and twin A aborted spontaneously, after that delayed interval delivery for the second twin was an option and 6 days later at gestational age 16+6 weeks further management with emergency cervical cerclage was done for the patient with no complications, patient was kept in the hospital for few weeks under observation and after that discharged home on hydroxyprogesterone injection weekly, she was followed up in the maternal foetal medicine clinic every 1 to 2 weeks until she reached 37 weeks of gestation the cerclage was removed, at 38+1 weeks of gestation she presented to the emergency with active labour and delivered spontaneous vaginal delivery alive baby boy in a good condition, mother and baby had uncomplicated postpartum course and they were both discharged in a good condition.

Case 2
31 years old lady primigravida with history of infertility for 5 years presented to our clinic with monochorionic diamniotic twin pregnancy after trials of invitro fertilization, at 19 weeks and 4 days of gestation she presented to the emergency with lower abdominal pain and prevaginal leaking with positive ammisure, at that time twin A was footling breech, she was kept on ampicillin 2gm stat then 1gm every 6 hours, after few hours patient expelled the first twin spontaneously, she was managed with delayed interval delivery with cervical cerclage, which was done for her at 20 weeks of gestation.
Patient was then followed up in the clinic frequently with no complications, at 37 weeks of gestation cervical cerclage was removed to allow the patient to have a trial of spontaneous vaginal delivery, so at 38 weeks and 3 days she presented to labour room with lower abdominal pain and prevaginal leaking and she was started on ampicillin due to positive culture for group b streptococci, she progressed smoothly through labour and delivered a healthy baby girl, mother and baby was doing well in postpartum period and both were discharged after 2 days in stable condition.

3. DISCUSSION
Twin pregnancies are associated with a higher risk of preterm delivery and this at a significantly earlier gestational age than singletons, resulting in infant morbidity and mortality [1].
In pregnancies presenting with extremely preterm labour or rupture of the membranes, significant prolongation of gestation and hence increase in foetal weight is expected to improve foetal outcome. For this reason, it can be tried to stop labour after birth of the first foetus. This procedure is defined as a delayed-interval delivery. It was first described by Carson in 1880 with a wait-and-see management [2]. Currently, obstetrical management has changed to active management using tocolysis, prophylactic antibiotics and cerclage. Currently delayed interval delivery is defined as every attempt to postpone birth of the second twin with at least placement of a high ligature of the umbilical cord and a delay of delivery of at least 24 hours.
In multiple pregnancies with preterm delivery between completed 22 and completed 25 weeks of gestational age, delayed delivery seems to be a useful therapeutic option to achieve a better outcome of the remaining foetus or foetuses [3].
The best approach for achieving a delayed-interval delivery is unclear. The authors’ approach is based upon our early experience with over 50 delayed-interval deliveries [4,5] and our in-sights from case series reported in the literature [6]. The key principles of our approach are:

- Appropriate selection of candidates
- Informed consent
- Exclusion of intraamniotic infection in undelivered siblings
- Drug-induced uterine relaxation
- Antibiotic prophylaxis
- Placement of a cerclage
- Administration of antenatal glucocorticoids

For patients undergoing delayed-interval delivery, we perform high ligation of the umbilical cord with absorbable suture and leave the placenta in situ, administer local and systemic anti-biotics, and place a cerclage. If uterine relaxation is necessary, we use nitroglycerin followed by a tocolytic, such as indomethacin [7].
An important reason to consider cerclage is that silent cervical dilatation may have played a role in the early birth of the first sibling. If this is a possibility, then cerclage may forestall the birth of the remaining sibling(s). Because it is usually impossible to exclude the possibility that cervical insufficiency was a contributing factor to the early delivery of the first fetus, we generally perform a cerclage in all patients attempting delayed-interval delivery [8].

Even if cervical insufficiency was not initially a contributing factor, reapproximation of the cervix after delivery of the first foetus may prevent future prolapse of foetal membranes and decrease the risk of development of intraamniotic infection. However, there are numerous reports of successful delayed-interval deliveries without surgical intervention [9].

The patient should be kept in the hospital for a minimum of seven days as many unsuccessful attempts at delayed delivery will declare themselves within this seven-day period (e.g., occurrence of maternal infection, preterm rupture of membranes, preterm labor, or non-reassuring foetal status) [8]. We monitor viable foetuses with electronic foetal heart rate monitoring for at least 30 minutes, three times daily. Non-reassuring findings would prompt intervention, such as delivery or amniocentesis and testing for intraamniotic infection. Ongoing maternal and foetal surveillance during latency involves assessment for signs of infection, premature labor, premature rupture of membranes, cervical change, foetal heart rate abnormalities, and other complications [8].

Length of latency is important since achieving an extended time interval between births of siblings at critical gestational ages is the basis for improved neonatal survival and reduced morbidity in siblings. In several series, survival rates for firstborns delivered at >24 to 25 weeks was 53 to 64 percent and 74 to 100 percent for their retained siblings. This is higher than the survival rate reported in a series where delayed-interval delivery was performed remote from viability (>16 weeks). In this series, survival of firstborns was 16 percent, and survival of retained siblings was 54 percent, highlighting the prognostic importance of the gestational age when the first multiple delivers [10].

Information on maternal morbidity is limited. Two studies reported maternal morbidity in approximately one-third of mothers [5,6]. In the authors’ series, 8 of 24 mothers had postpartum infection requiring antibiotic therapy, including one case of septic pelvic thrombophlebitis, but no transfusions, hysterectomies, or other major maternal morbidities (or mortality) [5]. However, serious maternal sepsis has been reported by others [6]. In addition, a case of severe uterine atony with intractable postpartum haemorrhage requiring hysterectomy has been described; pathology of the specimen revealed myometrial microabscesses. [6]

4. CONCLUSION

These 2 cases further illustrate that delayed interval delivery can be done by cervical cerclage with regardless of the type of chorionicity in the twins, and with this method we can delay the interval of delivery of the second twin up to 22 weeks.

REFERENCES
