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## DELAYED INTERVAL DELIVERY OF A TWIN PREGNANCY AFTER A FAILED ABDOMINAL CERCLAGE

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M. Tung'ani and D. Parmar

### SUMMARY

**Recurrent pregnancy loss has many causes and it is not always possible to elicit the exact etiology. One of the known etiologies is cervical anatomical defects, and this is often addressed with transvaginal or abdominal cerclage which, despite careful placement, may not always work leading to pregnancy loss. In twin gestation, loss of a pregnancy can be traumatic for a mother. This has led to the practice of delayed interval delivery whereby when the first twin is miscarried, attempts are made to prolong the pregnancy to salvage the second twin. We present the case of a mother who was pregnant with twins after many pregnancy losses, had an abdominal cerclage that failed and led to miscarriage of the first twin, but she still had a live birth of the second twin 139 days later.**

### INTRODUCTION

Recurrent pregnancy loss (RPL) has a prevalence of 1-3%<sup>1</sup>. Common etiologies cited in literature include anatomical uterine defects, cytogenetic abnormalities, maternal hormonal or metabolic disorders, autoimmune disorders and endometrial dysfunction<sup>2,3</sup>. Despite extensive research in this subject, almost half the cases of RPL remain unexplained. In such cases, empiric treatments with progesterone, anticoagulation and/or immunomodulation have been tried<sup>3</sup>. Delayed interval delivery (DID) of the second twin occurs when a significant amount of time is

allowed to lapse between delivery of the two babies to allow maturity of the second twin. The practice, involves delivering the first twin, tying and cutting the cord and making little attempt at delivering the placenta or the second twin. This management is picked from published case reports, as currently, there are no clear society guidelines on DID.

### THE CASE

A 38-year-old para 6+1 gravida 8 with two living children was referred at 12 weeks gestation with a history of five pregnancy losses. The pregnancy losses included one

intrauterine fetal demise at term, three second trimester miscarriages and one first trimester miscarriage. Her two living children were born in between the losses through Caesarean section, one at 30 weeks due to none reassuring fetal status, and another at 36 weeks. Of note was that in two of the second trimester miscarriages, she had a McDonald stitch put but she was not sure if it was removed during expulsion of the fetuses.

When she presented at 12 weeks, she was in good general condition with normal vital signs. Abdominal examination revealed a healed Pfannenstiel scar and a palpable uterus with a fundal height at 14 weeks. Ultrasound confirmed dichorionic diamniotic twin gestation at 12 weeks. A speculum examination done exposed a torn cervix with old slit-like tears at 5, 8 and 9 o'clock probably from prior obstetric events.

An impression of recurrent pregnancy loss of possible mixed etiology was made and she was sent for investigations. Among those done were complete blood count, blood sugar levels, thyroid function tests, beta 2 microglobulin, anticardiolipin, HIV, Hepatitis and Syphilis serology which all turned up within normal ranges or negative.

A transabdominal cerclage using Mersilene™ tape was put laparoscopically at 13 weeks. She was also put on dydrogesterone 10mg twice daily. She presented twenty-three days later at 16 weeks with lower abdominal pains and spotting of blood. Expectant management for three days failed and she progressed to inevitable abortion and a decision to remove the cerclage as an emergency and put her on

antibiotics, was made when membranes and one umbilical cord were visualized prolapsing through the cervical os. After removal of the cerclage, she expelled one twin within the next twenty-four hours, but the umbilical cord of the twin snapped and the placenta remained in utero. No further bleeding or pain was reported and an ultrasound done confirmed viability of the second twin with adequate liquor. The mother was appraised of the situation, counselled on her options and she opted to conserve the pregnancy. After a week of status quo, she was discharged home with clear information on danger signs.

Subsequent weekly visits with regular ultrasound scans and infection screening did not reveal any issues. She had adequate foetal growth and no features of infection or preterm birth. Her only worrisome visit was at 28 weeks when she presented with lower abdominal pains but upon evaluation, scanning, bed rest and analgesia, the symptoms resolved. She was however put on dexamethasone for lung maturity in preparation for preterm birth.

She progressed smoothly in the third trimester. At 36 weeks, an elective Caesarean section was done and a healthy live female infant weighing 3100 grams was delivered. Two placentas adjacent to each other were delivered, one healthy appearing and normal while the second was atrophic and appeared degenerated. Bilateral tubal ligation was also done as per the request of the mother. No major abnormalities were noted on the baby and no further complications occurred in the puerperium.

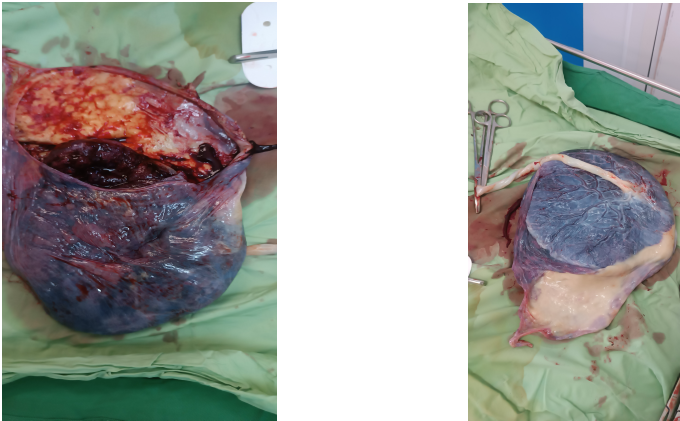


Figure 1 and 2: Appearance of the two joined

## DISCUSSION

In this case report, the mother had a cervical anatomical defect that we suspected as the cause of some of her pregnancy losses. This defect causes pregnancy losses more commonly in the second trimester<sup>1</sup>. Our patient had two pregnancy losses at 22 weeks and another loss at 24 weeks. She however also had other pregnancy losses - an intrauterine demise at 38 weeks, and a miscarriage at 8 weeks - that could not entirely be explained by the cervical defect hence the investigations done to rule out conditions like antiphospholipid syndrome and other maternal systemic conditions. Since the laboratory tests were non-revealing, we decided to deal with the cervical defect but still kept in mind the possibility of a multifactorial cause.

With her history of three failed vaginal cerclages, a repeat vaginal cerclage was deemed unfavorable. In cases where vaginal cerclage has failed or is not feasible, abdominal cerclage has been found to be effective<sup>4</sup>. Where abdominal cerclage is contemplated, then laparoscopic approach has been found to be superior to the open approach<sup>5</sup>. Putting the cerclage prior to pregnancy or early in the first trimester may technically be easier as you

avoid the physiologic challenges of pregnancy and the anatomical challenges of a bulky uterus. However, in our case, we had no choice as the patient presented at the beginning of the second trimester, and the manipulation of the uterus was made even harder by the fact that she had a bulkier uterus due to the twin gestation.

Delayed interval delivery (DID) is not an entirely new concept and has been recorded in many other pregnancies and studies have demonstrated its benefits to the remaining twin. Wang et al. did a systematic review of 492 pregnancies where DID was practiced and concluded that it is effective in increasing the survival rate of the remaining fetus where the first delivery happens at a very early gestation<sup>6</sup>.

Where DID has been practiced, clinicians have used various methods to try and prolong the pregnancy. Some of the methods used include tocolytics, antibiotics and steroids for lung maturity<sup>7</sup>. Though some scholars also recommend insertion of cerclage after the first twin is expelled<sup>6</sup>, others have achieved favorable outcomes even without cerclage<sup>(7)</sup>. In our case, analgesics, antibiotics and steroids were utilized in different stages of the

pregnancy. Cerclage was however deemed not feasible.

Some of the complications that can be expected from DID include chorioamnionitis, postpartum haemorrhage, abruptio placentae, coagulopathy and retained placenta<sup>8</sup>. It is hence prudent that these mothers are closely monitored. In our case, none of the major complications were encountered during and after the pregnancy.

Clearly there is both benefit and possible harm in DID, so how does one decide when to do it? Canu and Giannini made recommendations on when DID can be considered and these include the absence of intra-amniotic infections, lack of a pathology that requires termination, intact membranes of the second twin and in conditions where the first twin was delivered before 30 weeks<sup>9</sup>. In our case, all these conditions were met.

Our case report demonstrates that delayed interval delivery of the second twin after miscarriage of the first twin has benefits. It also raises questions on whether cerclage is necessary after the first twin has been expelled as an attempt to prolong the pregnancy. It is our hope that in publishing this case, it will open doors for further research in to the subject leading to development of guidelines that can benefit more mothers.

#### CREDIT

Both authors were involved in the management of the patient at different stages in the pregnancy. The first author prepared the introduction, case summary and correspondence. The second author contributed in the discussion.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

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