

# Conservative treatment of multiple pregnancies after delivery and a fetal miscarriage: two case reports

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## Summary

Due to the increased availability of infertility treatment, multiple pregnancies, with various resulting complications, have become more common. Two cases of triplet pregnancies with delayed delivery – interval ranged from 6 to 56 days – are reported.

The first woman in the 23<sup>rd</sup> week of a triplet pregnancy came to the hospital because of premature rupture of membranes of one amniotic sac and had a miscarriage of one of the fetuses the same day.

The second woman in the 26<sup>th</sup> week of a triplet pregnancy also came to the hospital because of bleeding and contractions and had vaginal delivery of the first triplet a few hours later. After confirming that the remaining two fetuses were in good condition, both patients were kept under observation with only antibiotic therapy for the first one and antibiotic and tocolysis for the second.

Fifty-six days following admission to our hospital the first woman gave birth to twins while in her 32<sup>nd</sup> week. The second woman gave birth six days following admission (in her 27<sup>th</sup> week).

The successful outcome of these cases demonstrates that non-intervening conservative methods could be a feasible alternative to invasive intervention. We hope that our cases will encourage more physicians to try out and report non-intervening methods so that enough information can be gathered to help make correct management decisions in the future.

## Introduction

Multiple pregnancies have a significantly increased incidence of preterm labour and preterm rupture of membranes. This leads to an increase in neonatal morbidity and mortality due to prematurity [8, 9]. Intrauterine growth retardation may also make the management of multifetal pregnancies difficult [2, 3, 7].

The natural history of premature rupture of membranes in multifetal pregnancies is delivery of all fetuses after a relatively short latency period. This occurs in most cases because the events leading to delivery of the first fetus continue and finish with delivery of the remaining fetuses. On those rare occasions, when the uterus becomes quiescent after delivery of the first fetus, the risk of ascending infection and severe chorioamnionitis is significant and most obstetricians opt for measures to accelerate the delivery of the remaining fetuses [2].

There is an increasing number of cases described in the recent literature in which efforts have been made to prolong the interval between deliveries after preterm premature rupture of membranes and delivery of the first fetus in multifetal pregnancies. Encouraged by this, we have since attempted to delay the delivery interval in two patients with triplet pregnancies and premature rupture of membranes at 23 and 26 weeks' gestation, respectively.

## Case Reports

### Case 1

A 29-year-old woman, gravida 1, para 1, married with no children, with a history of primary infertility conceived a triplet gesta-

tion by in vitro fertilization. It was her first gestation. The woman was generally in good health and her family medical history was unremarkable. She was hospitalized at 23 weeks' of triplet gestation because of premature rupture of the membrane of one amniotic sac.

At 22 weeks' gestation the patient had an ultrasound examination. It showed three fetuses corresponding to 21 weeks. There were three placentas and three separate amniotic sacs.

Upon admission physical examination revealed an enlarged uterus, corresponding in size to 29 weeks' gestation and early beginning of delivery. Cardiac function was positive. There was diastole of the cervix and the projected degree was at the plus 2 point, according to the Bishop score.

After 30 minutes she miscarried one fetus. The external cervical OS was dilated to 4 cm, the umbilical cord was protruding through the cervix into the vagina and there was a slight bloody discharge. An attempt was made to ligate the umbilical cord, which was successful.

Ultrasound examination showed two fetuses corresponding to 23 weeks' gestation in good condition with a normal quantity of amniotic fluid. The fetal weights were estimated at 650-g and 690-g. The woman remained in the hospital under strict clinical and laboratory observation.

The patient was given amoxicillin prophylactically because of the risk of infection. Neither cerclage nor tocolytic drugs were considered due to the risk of infection. Monitoring indicated that the fetuses were growing as expected, with no evidence of infection. At 32 weeks' gestation regular contractions occurred. Fetal weights were estimated at 1800-g and 1600-g. Caesarean section was necessary to protect the first embryo.

Twin babies, a boy and a girl, were born weighing 1790 g and 1610 g respectively. The two placentas were of normal size while the third one had shrunk, with signs of fibrosis and calcification, weighing 100 gr. Post-operative recovery was uneventful and the twins remained in the incubator for thirty days until they reached 2000 gr and 2200 gr in weight, respectively, whereupon they were released from the hospital in good health.

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### Case 2

A 28-year old woman gravida 1, para 1, with a history of primary infertility conceived a triplet gestation by in vitro fertilization after transfer of three embryos. The woman was in good health and the family medical history was unremarkable. It was her first gestation.

She was hospitalized at 26 weeks' of a triplet pregnancy because of bleeding and contractions. Within a few hours the membranes of the lowest amniotic sac ruptured. Physical examination revealed an enlarged uterus, corresponding in size to 31 weeks' gestation. The external cervix was dilated to 8 cm and there was a slight bloody discharge. The ultrasound showed three fetuses corresponding to 24 weeks' gestation. There were three placentas and three separate amniotic sacs.

Within 10 hours the patient vaginally delivered triplet A, a male weighing 850 gr. Immediately after his birth intubation and mechanical ventilatory support took place and he was transferred to the Neonatal Intensive Care Unit for further treatment. The umbilical cord was ligated at the cervical OS. The mother remained in the hospital under observation and was given amoxicillin because of the risk of infection and tocolysis. Cerclage was not considered.

Six days later the mother presented with a high fever, up to 39.4°C, and abdominal pain. Laboratory investigation revealed white blood cells 22,000/mm<sup>3</sup>, erythrocyte sedimentation rate of 109 mm 1<sup>st</sup> hour and C reactive protein 4.53 mg/dl. A cesarean section was then performed. Two male infants were born each weighing 1030 gr and 950 gr, respectively. Both neonates required mechanical respiratory support and remained in the ICU for 70 days with weights of 2350 and 2250 gr, respectively. The neonates were subsequently discharged in good condition.

### Discussion

Prolongation of the remaining pregnancies after delivery of one fetus is rare but has been described. A literature review on this subject published in 1992 summarized 26 articles reporting on 28 pregnancies with 65 fetuses, 9 from triplet and 19 from twin pregnancies [7]. Since then few cases have been published in the literature. In 1994 Arias published one case of triplet and four cases of twin pregnancies [2], Chavkin and co-workers one case of triplet pregnancy [5] and Lavery and co-workers five cases of triplet pregnancies [6] with delayed interval delivery after delivery or miscarriage of one fetus. In 1996 Bergella and co-workers published a case of triplet pregnancy [3], Antsaklis and co-workers one triplet and two twin pregnancies [1] and Chang and co-workers a case of triplet pregnancy [4].

Poeschmann *et al.* advocate the prophylactic use of tocolysis based on the comparison between a group of six women with a group of 13 women [7]. Wittmann *et al.* on the other hand, from their review of the same literature, do not recommend the use of tocolytics except in cases in which contractions begin again a few days after the initial delivery [8]. However, they do not regard cerclage to be associated with higher risk of infection. Berghella *et al.*, point out that in multiple gestation cervical cerclage has been used following spontaneous expulsion of the lowest fetus in eight successful cases and omitted in five other successful cases. The need for cerclage is best based on

the post-procedure cervical status, which should be evaluated both manually and sonographically [3].

Each case is unique and presents a medical situation that must be met with the best possible solution. Medical intervention is not, however, always necessarily indicated. In the first case presented here, no attempt could be made to save the first triplet as the miscarriage occurred immediately after the mother came to the hospital. Antibiotics were given prophylactically because of the risk of infection while tocolytics were not given. In the second case, antibiotics were used prophylactically together with tocolytic therapy.

The cervix closed spontaneously in both cases and funneling was seen by ultrasound after the procedure. Thus, cerclage was ruled out because of the risk of infection.

We propose that conservative treatment could safely be attempted and medical intervention used only when necessary. The risk of side-effects would then be minimized and unnecessary hardships for the woman and her family avoided. Although the necessity of such therapies is not proven, it seems prudent to use them. As for the prognosis of the fetus it is better if it be given an opportunity to grow further in spite of the risk of infection. We also feel there is an urgent need to propose management guidelines for such cases.

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