

# Delayed Interval Delivery in Triplet Pregnancy: A Case Report and Literature Review<sup>✉</sup>

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We report a case of triplet gestation delivered at 22 weeks with an interval of 48 days. We performed immediately a McDonald's cerclage after the first triplet's delivery and used intravenous beta-mimetic and broad-spectrum antibiotics for 14 days. In the literature whereas delaying the delivery of remaining fetuses improves their prognosis, there is no consensus about optimal management for these patients.

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**Key Words:** Multiple pregnancy, Preterm labour, In vitro fertilization

## Introduction

Multiple gestations account for 1-2% of all births and represent 10-14% of the overall perinatal mortality, a rate five to ten times higher than that of singletons.<sup>1</sup> Because of the increase use of assisted reproductive technologies, the number of high order pregnancies has significantly increased over the past 20 years.<sup>2</sup> These pregnancies may be complicated by conditions that require delivery at preivable ages or so early as to pose a risk of serious morbidity in association with severe prematurity.<sup>3</sup> Delayed interval delivery was first described by Carson.<sup>4</sup> Although case reports have clearly demonstrated that delayed interval delivery can be successfully achieved in some cases, the optimal management is not defined: cerclage, tocolysis, hospitalization and antibiotic therapies are all controversial.<sup>5,6</sup>

## Case Report

A 31 year old woman, gravida 1, para 0 was found to have triplets after an ovarian hyperstimulation and in vitro fertilization cycle. She was admitted to our clinic at 22 weeks gestation because of regular contractions and premature rupture of the membranes of the first triplets. Pelvic examination revealed that the cervix was dilated to 5 cm and effaced 70% and membrane rupture was confirmed. Ultrasonographic

examination confirmed the diagnosis of trichorionicity. Bed rest, tocolysis with intravenous ritodrine and intravenous administration of Amoxicillin-Clavulonic acid 3 g per day were initiated. Laboratory investigation showed there was no inflammatory sign with normal white blood cell count and negative C-Reactive protein (CRP) levels. Two days after admission, the patient had a delivery of the first fetus. He weighed 450 g and died shortly after birth. The placenta was retained in utero and the umbilical cord was ligated with no.0 Vicryl and cut at the cervix level. The lower uterine segment and the vagina was irrigated with iodized serum. Immediately after delivery of the first triplet, a McDonald's cerclage was performed. Fetal heart sounds of the second and third triplets were normal and membranes were intact. Tocolysis with ritodrine was continued for 14 days and Gentamicin was added to the initial antibiotic treatment. Urine and blood cultures were negative. Antenatal corticosteroid therapy used for fetal lung maturation (Betamethasone 12 mg x2). The second and third twin were delivered by cesarean section at 27 weeks+6 days gestation because of the rupture of the membranes of third triplet, after 48 days of the delivery of the first fetus. The second triplet's heart sounds couldn't be recorded two days before the cesarean section. Third triplet was a female newborn weighing 1240 g with an Apgar score of 5 at 1 minute. She was transferred to neonatal intensive care unit and discharged 42 days later weighing 2030 g without any complication.

## Discussion

When premature rupture of the membranes occurs in a multiple gestation, preterm labor soon follows, with delivery of both fetuses. In some rare cases the uterus ceases to contract once the first fetus is delivered.<sup>5,7</sup> During the last two decades an increasing number of papers reported efforts to prolong the interval between the two deliveries with cerclage, tocolysis, prophylactic antibiotics and corticosteroids.<sup>7,8,9</sup> Farkouh et al.<sup>3</sup> suggested that ideal candidates for delayed-interval delivery are those in whom delivery of the first fetus occurs at an early

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gestational age (<24 weeks) and in whom no previous cerclage has been placed in the current pregnancy. There has been some controversies about the use of antibiotic prophylaxis in cases without infection and intact membranes.<sup>10</sup> Arias<sup>11</sup> proposed a one-week antibiotic regimen administered by intravenous infusion for the first 3 days following premature rupture of the membranes. We used 14 days antibiotic prophylaxis in our case. Tocolysis has been used after delivery of the first twin with multiple combinations of beta-2-agonists, calcium inhibitors such as nifedipine, antispasmodics, anti-inflammatory drugs, magnesium sulfate or progesterone.<sup>12,13</sup> We performed intravenous ritodrine regimen for 14 days. The use of cervical cerclage for delayed interval delivery has been an issue of continuing debate. Some authors suggest that, cerclage should be made immediately after delivery of the first twin and it is associated with a longer inter-delivery interval without increasing the risk of infection.<sup>13,14,15,16</sup> And some authors use cerclage infrequently.<sup>17,18</sup> We performed a Mc Donald's cerclage, immediately after delivery of the first triplet in our case. Antenatal corticosteroid therapy is indispenseable after 26 weeks gestation for fetal lung and brain maturation; it is a major prognosis factor for the second twin though delivery interval is longer without any significant statistical difference.<sup>13</sup> We used two times Betamethasone 12 mg for fetal lung maturation. Kalchbrenner et al<sup>19</sup> described one case of maternal septicemia with favorable outcome after antibiotic treatment. No cases of maternal death have been reported. Morbidity has been essentially acute bleeding, infection or disseminated intravascular coagulation. Similar with the studies, our case didn't develop chorioamnionitis in her treatment duration. Fayad et al.<sup>13</sup> obtained, in their series of seven triplet pregnancies with delayed deliveries, an overall survival rate of 42.8% and mean delay the second delivery was 22.7 days. For our patient interval delivery was 48 days with a combine management of cerclage, tocolysis and antibiotics.

Consequently, in multiple pregnancies complicated with preterm delivery, delayed interval delivery should be discussed with the patient, considering risks and benefits on each case

## Üçüz Gebelikte Geciktirilmiş Aralıklı Doğum: Vaka Sunumu ve Literatürün Gözden Geçirilmesi

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22. gebelik haftasında preterm doğum yapan üçüz gebelikli olguda, kalan fetuslerin doğumunun 48 gün süreyle geciktirilmesini vaka sunumu olarak sunduk. Olguya ilk fetusun doğumundan hemen sonra Mc Donald serklaj yapıp 14 gün süreyle in-

travenöz beta-mimetik ve geniş spektrumlu antibiyotik tedavisi uygulandı. Literatürde, kalan fetuslerin doğumunun geciktirilmesinin prognozu iyileştirdiği bildirilmekle birlikte bu hastaların optimal yönetimi konusunda tam bir konsensus oluşmamıştır.

**Anahtar Kelimeler:** Çoğul gebelik, Preterm doğum, In vitro fertilizasyon

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