

# Single Fetal Death in Twin Pregnancies

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## Abstract

**Objective:** To evaluate the cases that followed and treated at current clinic with single fetal death in twin pregnancies and preterm labor diagnose.

**Methods:** The cases applied to our clinic with single fetal death in twin pregnancies. Three (37.5%) out of the eight cases were nulliparous, 5 (62.5 %) multiparous. All of the cases followed up with preterm labor diagnose. On ultrasound examination (4D Voluson 730 Pro ultrasound device), the live fetus of 4 cases were 34 weeks, 2 33 weeks and the others were 28 weeks.

**Results:** This retrospective study was performed at Dicle University, Department of Obstetrics and Gynecology, from January 2005 to December 2007. The obstetric history, age, diagnosis, fetal obstetric ultrasound findings, biochemical values, delivery types, birth weights and APGAR scores of 8 cases who diagnosed as single fetal death in twin pregnancies were evaluated.

**Conclusion:** Single fetal death in twin pregnancies, causes more preterm labor and prematurity when compared normal twin pregnancies and may affect the prognosis of the living fetus. Therefore, in these pregnancies, multidisciplinary approach, closer monitoring are very important for maternal and fetal prognosis.

**Keywords:** Twin pregnancy, single fetal death of one twin.

## İkiz eşlerinden birinin ölümü: Sekiz olgu analizi

**Amaç:** Kliniğimize preterm eylem tanısı ile başvuran ve ikiz eşinin intrauterin ölümü ile komplike olmuş olguların değerlendirilmesi.

**Yöntem:** Bu retrospektif çalışma, Ocak 2005 ile Aralık 2007 tarihleri arasında Dicle Üniversitesi Tıp Fakültesi, Kadın Hastalıkları ve Doğum Anabilim Dalı'nda yapılmıştır. İkiz eşinin intrauterin ölümü tanısı almış olan 8 olguda; obstetrik öykü, yaş, yatış tanısı, obstetrik ultrasonografi bulguları, biyokimyasal testler, doğum şekli, bebek doğum kiloları ve APGAR skorları incelendi.

**Bulgular:** İkiz eşinin intrauterin ölümü tanısı ile başvuran 8 olgunun ortalama yaşı 28.75 idi (22-39). Olgulardan 3'ü (%37.5) nullipar, 5'i (%62.5) multipar idi. 4 olgunun yaşayan fetüslerinin 34 haftalık, ikisinin 33 haftalık ve diğer ikisinin ise 28 haftalık oldukları saptandı. Olguların altı tanesi erken gebelik haftalarından itibaren kliniğimizde takip edilmekte idi. Diğer ikisi ise dış merkezde takip edilmiş ve doğum eylemlerinin başlaması sonrasında kliniğimize refere edilmişti. Olgulardan 2'si (%25) mükerrer sezaryen, 4'ü (%50) fetal distress endikasyonu ile sezaryen operasyonu ile doğurtuldu. Diğer iki olgu (%25) ise spontan vaginal yol ile doğum yaptı. Yeni doğanların doğum ağırlıkları, ortalama 1987.5 (1100 - 2600 g) arasında idi. Ortalama 1 ve 5. dakika APGAR skorları 6.3 ve 8.7 idi.

**Sonuç:** İkiz gebeliklerde ikiz eşinin intrauterin ölümü; normal bir ikiz gebeliğe oranla daha komplikasyona neden olabilir, ayrıca yaşayan fetusun da prognozunu etkileyebilir. Bu gebeliklerde yakın takip ile oluşabilecek komplikasyonlar azaltılabilir.

**Anahtar Sözcükler:** İkiz gebelik, ikiz eşinin ölümü.

## Introduction

In the recent years, with the increase of artificial reproduction techniques, the incidence of multiple gestations has increased. In United States of America (USA), in the last 20 years, the

incidence and complications related with multiple gestations have been increased.<sup>1,2</sup> Single fetal death in twin pregnancies, is a rare complication of twin pregnancies. It is generally seen in the second trimester, and the incidence

has been reported as 0.5-6.8%.<sup>3</sup> The single fetal death in twin pregnancy is a risky situation for both live fetus and the mother. These risky situations are; disseminate intravascular coagulation (DIC), renal injury, preterm labor and prematurity. For this reason, in these pregnancies, multidisciplinary approach, and closer follow up are very important for the fetus and mother. We aimed to evaluate 8 cases of single fetal death in twin pregnancies that followed and delivered in our clinic.

## Methods

This retrospective study was performed at Dicle University, Department of Obstetrics and Gynecology, from January 2005 to December 2007. The obstetric history, age, diagnosis, fetal obstetric ultrasound findings, biochemical values, delivery types, birth weights and APGAR scores of 8 cases who diagnosed as single fetal death in twin pregnancies were evaluated.

## Results

This retrospective study was conducted at Dicle University, Department of Obstetrics and Gynecology Department from January 2005 to December 2007. The mean age of the cases was 28.75 (22-39). The cases applied to our clinic with single fetal death in twin pregnancies. 3 (37.5%) of the cases were nulliparous, 5 (62.5%) multiparous. All of the cases followed up with preterm labor diagnose. On ultrasound examination (Voluson 730 Pro GE Healthcare, Milwaukee, WI, USA), the live fetus of 4 cases were 34 weeks, 2 33 weeks and the others were 28 weeks. The mean gestational weeks of the death fetuses were 24.5 (22-27) weeks. Six of our cases had been followed up from the early gestational weeks of gestation. Two of them were followed at outside centers and referred to our clinic when labor began. All of the cases

were dichorionic and diamniotic. The routine laboratory values of all cases were evaluated and international normalized ratio (INR) were studied. The coagulation parameters were all normal. 2 (25%) of the cases had cesarean with repeat cesarean indication, and 4 (50%) with fetal distress indication. The other 2 (25%) of the cases had delivered vaginally. The mean birth of the newborns were 1987.5 g (1100-2600). The mean 0 and 5. Minute APGAR scores were 6.3 and 8.7. Three of the babies followed up in the intensive care department and had phototherapy for jaundice.

## Discussion

Single fetal death in twin pregnancies, is a rare complication of twin pregnancies. It is generally seen in the second trimester, and the incidence has been reported as 0.5-6.8%.<sup>3</sup> The etiology is unknown exactly, but the major causes are; twin to twin transfusion syndrome, chromosomal anomalies, preeclampsia, Rh isoimmunisation, single umbilical artery and placental anomalies.<sup>4</sup> Mesbah et al., studied 35 single fetal death in twin pregnancies, and reported the maternal complications as; preeclampsia, gestational diabetes, postpartum hemorrhage, and the fetal complications; prematurity, twin to twin transfusion syndrome, and sepsis.<sup>5</sup> We had not any complication and we think that this is related to regular follow up of our cases. But three of the babies followed up in the intensive care department and had phototherapy for jaundice. The most important factor affecting the prognosis of single fetal death in twin pregnancies are; chorionicity and placentation. The perinatal mortality of monochorionic twin pregnancies is reported as double that of dichorionic twin pregnancies.<sup>6</sup> Our clinical approach is to detect the chorion and placenta carefully. All of our cases was dichorionic and diamniotic, for that reason we had no com-

plication. The other important point is, delivery type and time. Cattanaah et al, favour conservative management until 37 weeks' gestation, if foetal movements, cardiotocography, and ultrasonography show no abnormalities.<sup>7</sup> Santema et al have advocated treating impending preterm labour before 34 weeks with intravenous tocolytics.<sup>8</sup> Yayla et al., reported 93% of their cases delivered vaginally.<sup>9</sup> Our clinical approach is follow up the cases until term, but in this study all of the cases were followed up with preterm labor diagnosis and delivered preterm. Coagulopathy and DIC are the probable complications in single fetal death in twin pregnancies.<sup>9,10</sup> There was not any failure about coagulopathy values of the case in our study.

## Conclusion

In conclusion, single fetal death in twin pregnancies, causes more preterm labor and prematurity when compared normal twin pregnancies and may affect the prognosis of the living fetus. Therefore, in these pregnancies, multidisciplinary approach, closer monitorisation are very important for maternal and fetal prognosis.

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