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EDİTÖRE MEKTUP/LETTER TO THE EDITOR

Monochorionic monoamniotic twins circumvallate placenta and conglomerated umbilical cord

Monoamniotic monokoryonik ikiz sirkumvallat plasenta ve konglomere umbilikal kord

Sibel Özler[1], Efser Öztaş[1], Dilek Uygur[1], Ayşe Kırbaş[1], Nuri Nanışman[1]

[1]Department of Perinatology in Zekai Tahir Burak Women's Health Education and Research Hospital, Ankara, Turkey

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Dear Editor,

A monozygotic Twin pregnancy seen about 3-4% in every 1,000 births[1,2]. Increasing invitro fertilization (IVF) rate increases the probability of twin pregnancy. Approximately 21 twin pregnancy seen in every 1000 IVF births[3]. MCMA twin pregnancy rate's is one in every 10000 births[4]. MCMA twin pregnancy occur after fertilization of 8 to 12 days with the division of the zygote[5]. Risk factors for MCMA Twin pregnancy is accused of assisted reproductive techniques, ethnic origin, advanced maternal age, genetic and epigenetic mechanisms[6,7]. Survival rate of MDMA twins is between 50% and 60%[8]. Fetal complications of MCMA twins pregnancys are fetal loss, twin-twin transfusion syndrome, preterm birth, cord entanglement, congenital anomalies and intrauterine fetal growth restriction, and maternal complications are pre-eclampsia, anaemia, antepartum haemorrhage, postpartum haemorrhage and operative delivery[4,9,10]. Despite all these complications, there is not a consensus on the timing of the birth. Here we present MCMA twins pregnancy management, complicantions with a MCMA twin pregnancy case in 31th gestation week which have single fetal loss and cord entanglement.

A 27-year-old gravida 2, para 1 woman with twin gestation at 29 weeks, was referred to our perinatology outpatient clinic for a suspected discordant fetal anomaly. According to the patient's history, it was a spontaneous pregnancy and her medical history was. She had one previous uncomplicated pregnancy with a healthy spontaneous term delivery. No history of genetic disorders or structural anomalies was noted in the family history of the both parents.

Abdominal 2D ultrasound revealed that there was one placenta with lack of amniotic membrane between the two female fetuses. Also umbilical cord entanglement was observed by ultrasonography. Detailed ultrasonographic examination revealed that (Voluson730 PRO, GE Healthcare, USA) one twin was normal in appearance and appropriate for gestational age, while the other twin had a macerated appearance for a long time ago with a normal fetal size. The parents were counseled about the prognosis of the fetuses and the possible risks of monoamniotic monochorionic pregnancy and cord entanglement.

Hospitalization was offered for observation but rejected by the patient. Subsequent prenatal course was unremarkable. Two weeks later, the patient came back to our outpatient clinic for routine examination. Sonographic examination demonstrated the demise twin and normal heart tracing in the healty twin. Cesarean section was performed immediately. The first alive baby girl was delivered with APGAR scores of 6 and 8 at 1 and 5 minutes respectively, weighing 1150 grams. No gross abnormalities were observed. Second newborn was a macerated stillborn, weighing 1100 grams. The color of amniotic fluid was dark brown and it was not lucent probably due to meconium staining. The cords of fetuses were completely

Yazışma Adresi/Address for Correspondence: Dr. Sibel Özler, Department of Perinatology in Zekai Tahir Burak Women's Health Education and Research Hospital, Ankara, Turkey , E-mail: sibelozler@gmail.com
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conglomerated (Figure 1(a)). The ex baby had clenched hands and club foot as revealed in the previous ultrasound scan in our clinic (Figure 1 (b)) and also the placenta was observed to be circumvallate as well (Figure 1(c)). Alive fetus was followed in the neonatal intensive care due to prematurity. Living infant discharged 60. day after from the day she was born. Karyotype analysis of both fetusus were 46 XX.

Figure 1. a) Umbilical cord entanglement during the cesarean section (blue arrow), b) Monochorionic monoamniotic plasenta (black arrow), umbilical cord entanglement (blue arrow), clenched hands (white arrow), club foot (green arrow), Circumvallate placenta (orange arrow), c) Circumvallate placenta (white arrow).

Twin pregnancies constitutes 1.2% of all pregnancies and total perinatal mortality rate is between 10-14%[11]. Monochorionic twins constitute less than 1% all of twin pregnancies and perinatal mortality rate of monochorionic twins is 3 to 5 times higher than dichorionic twins[12]. Compared to dichorionic twins, perinatal loss rate of monochorionic twins is more than 12 times before 24 weeks[13]. After the death of one of the twin pairs, rate of the major morbidity and mortality rate is 46% for the other twin partner[14].

Detecting early complications, such as fetal malformations and cord entanglement in monochorionic twin pregnancies by ultrasound and doppler monitoring is important in order to improve prenatal diagnosis[15]. The risk of cord entanglement in monoamniotic twins representing adverse movements in the second trimester, increased to 40-70%. In the last trimester, the space needed for movement of twin is reduced, so the risk of cord entanglement is decreased.

The cord entanglement can be diagnosed by Doppler and ultrasound in the early weeks of pregnancy. The lack of end-diastolic flow in the umbilical artery doppler tracking of mono-amniotic twins is less informative than in singleton pregnancies[16]. Cordero et al. looked 36 MCMA twin pregnancy, and they reported in 15 MCMA twins of these determined cordon entanglement, 3 MCMA twins determined twin-twin transfusion syndrome, 4 newborn revealed IUGR, 6 newborn had a congenital malformation. In additional they reported 5 MCMA twin have been delivered before 31th gestational week, 9 MCMA twin between 31-32th week and 12 MCMA twin between 33-34th gestational week 8. Dıas et al. determineted cordon entanglement to 18 MCMA twin pregnancy between 11-16th gestational week by B-mode and Doppler ultrasonography, and they reported rate of cordon entanglement and fetal loss 74 % and 21%, respectively[17].

If one of the fetuses is determined to be death in a twin pregnancy, chorionicity and amniotic number should be detected. Early birth should be planned when MCMA twin pregnancy is encountered. As a result, serial ultrasound and Doppler examinations are not enough to detect any fetal complications or fetal death in MCMA twin pregnancy.

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