Two placentas in singleton pregnancy with fused umbilical cord which has its own placental insertion site forming 3-vessel cord at fetal end is an extremely rare case. This present case describes two placentas with fused umbilical cord with an episode of vanishing twin syndrome and there seems to be a strong relationship between these two events. A 37-year-old woman, gravid 0, para 0, visited emergency room with an episode of vaginal bleeding without pelvic cramps at 8 weeks and 5 days of gestation and repeated ultrasonic exams revealed reabsorption of vanishing twin and two separate placentas on anterior and posterior body of uterus. At 40 weeks and 4 days, the patient delivered a viable female infant weighing 3,900 g via Cesarean section and postpartum examination of the placentas and membranes confirmed two placentas with fused umbilical cord. Two placentas were almost equal in size and there were 2 cord insertions, 1 into each placenta. The cord at each of the placental disc had marginal insertion site and main placental disc cord had 2 arteries with one vein (3 vessel-cord) whereas side placental disc cord had one artery with one vein (2 vessel-cord). Several hypothesis for this two placentas with fused umbilical cord in singleton pregnancy, were proposed including placenta abnormalities after in vitro fertilization-embryo transfer procedure, succenturiate lobes and fetus in fetus, however, further evaluation is need.

Keywords: Two placentas; Fused umbilical cord; Vanishing twin syndrome; Succenturiate lobes

Two placentas are rare in pregnancies, including succenturiate placental [1]. Two placentas with fused umbilical cord forming 3 vessels cord at the fetal end which has its own insertion site to each placental disc is an extremely rare case in a singleton pregnancy. In this case, we observed two placentas with fused umbilical cord with an episode of vanishing twin syndrome and there seems to be a strong relationship between these two events. Here, we report two placentas in singeton pregnancy with fused umbilical cord in the pregnant woman of vanishing twin.

Case Report

A 37-year-old woman, gravid 0, para 0, visited emergency room with an episode of vaginal bleeding, diagnosed as threatened abortion with 1.93×1.71 cm sized subchorionic hematoma. The fetus was 8 weeks and 5 days sized which was resulted from in vitro fertilization-embryo transfer (IVF-ET) and there was 2.23×1.62 cm (about 6 weeks size) gestational sac like lesion at uterine fundus (Fig. 1A). Follow-up ultrasonic evaluation revealed previously found gestational sac like lesion which contained no embryo with subchorionic hematoma and this appeared to be vanishing twin syndrome. No additional subchorionic hematoma and empty gestational sac were found at 21 gestational week, however, the placenta appeared equally divided into anterior and posterior body of uterus.
Nayoon Park, et al. Two placentas with fused umbilical cord posterior lobes with umbilical cord containing 3 vessels (Fig. 1B). Closer inspection with follow-up ultrasonic exam confirmed two placentas—anterior and posterior, respectively—and the cord Doppler systolic/diastolic (S/D) ratio remained in the normal range 1.9 and 2.24, respectively. Among the two placentas, it was difficult to differentiate main placenta which supply fetus because of the individual umbilical cord of each placenta and the complexity of two umbilical cords in amniotic cavity (Fig. 1C, 1D).

At 40 weeks and 4 days, the patient delivered a viable female infant weighing 3,900 g via Cesarean section with diagnosis of suspicious cephalopelvic disproportion and an Apgar score was 9/10 at 1 and 5 minutes. Inspection of the postpartum placentas, membranes, and cord confirmed ultrasound findings. The placenta consists of two placental discs—13 × 16 × 3 cm sized main disc and 13 × 12 × 2.5 cm sized side disc, respectively—and there were 2 cord insertions, 1 into each placenta (Fig. 2A). The cord at each of the placental disc had marginal insertion site and main placental disc cord had 2 arteries with one vein (3 vessel cord) whereas side placental disc cord had one artery with one vein (2 vessel cord) (Fig. 2B, 2C). The umbilical cord had total length of 24.5 cm and the umbilical cord of the side placental disc was fused at the insertion site of the main umbilical cord forming normal 3 vessel cord at the fetal end. The fused umbilical cord measured 11 cm in length and 0.8 cm in diameter.

After delivery, the baby was taken whole body X-ray and abdominal ultrasound to exclude fetus in fetus and 2-D echocardiography was also taken to exclude cardiac input overloads resulted from two placentas. No abnormalities were found in the evaluation of the infant (Fig. 2D).

**Discussion**

Two placentas are rare in pregnancies, including succenturiate pla-