

# Twin Pregnancy Complicated with an Antepartum Single Fetal Demise

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**Abstract:** From January 1, 1987 to December 31, 2002, 8 cases of twin pregnancy were complicated with a single intrauterine death at Fukuoka University Hospital. Three of the 8 cases were dichorionic twin pregnancies and the mothers had all received assisted reproductive technology (ART). The mean gestational age at diagnosis was  $29.6 \pm 1.7$  weeks (range 20–36 weeks) and the mean gestational age at delivery was  $33.0 \pm 1.1$  weeks (range 28–38 weeks). The mean interval between fetal death and delivery was  $23.5 \pm 14.8$  days (range 0–122 days). Maternal disseminated intravascular coagulation did not occur in any case. Seven infants were delivered by cesarean section. The mean birth weight of the live born neonate was  $1,911.4 \pm 236.0$  g (range 1,325–3,366 g).

Overall, the intact (with no abnormalities) survival rate of live born neonates was 63% (5 of 8 patients). Cystic periventricular leukomalacia or periventricular leukomalacia occurred in 2 of 8 infants (25%) during their first month of life and later developed to psychomotor retardation and cerebral palsy. One infant with cerebral palsy was a dichorionic twin. The remaining one was monochorionic twin born at 32 and 1/7 weeks of gestation with the 5 minute Apgar score was 6 and the birth weight of the infant was 1,620 g. This infant died on the 14th day after birth due to cardiomegaly and congestive heart failure.

In conclusion, these data documented high rates of neonatal mortality and brain damage in twin pregnancy complicated with single intrauterine death. In addition, our findings suggest that dichorionic twin pregnancy after ART may be far more dangerous than a normal pregnancy.

**Key words:** twin pregnancy, intrauterine fetal death, cerebral palsy