

# 산전 초음파를 이용한 일란성 쌍태아의 예후평가

100 가 1  
 250 가 1  
 chorionicity  
 33% dichorionicity  
 monochorionicity 370-400 66% 1

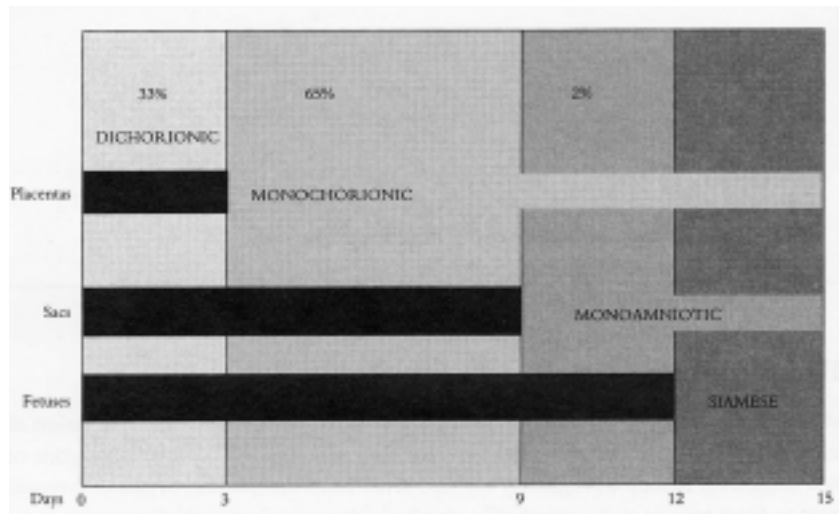


그림 1. Monozygotic twin embryonic splitting placentation

Monochorionic (MC) gestation 10 24  
 fetal loss rate 3-6 , perinatal mortality 2-4 , single fetal demise 2 ,  
 24 32 2 ,  
 4 , 2-3  
 MC gestation DC gestation 가 MC  
 twin counseling . DC gestation MC  
 twin 가 counseling MC gestation MC  
 가 DC gestation

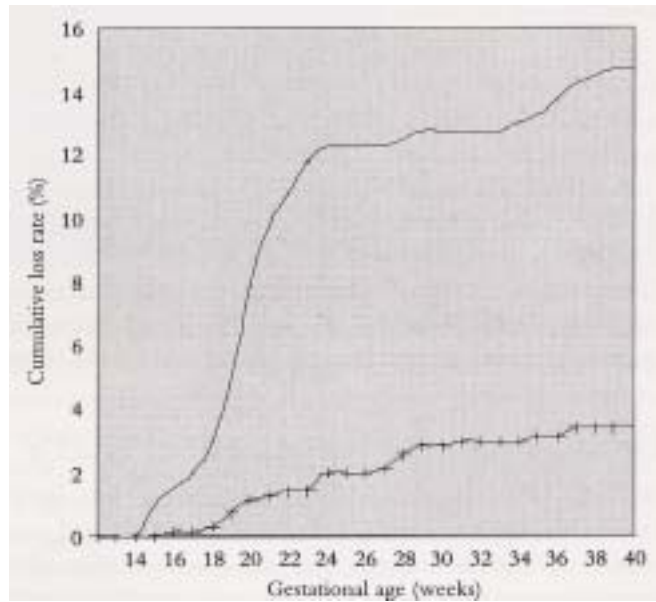


그림 2. Monochorionic (solid line) dichorionic (dashed line) gestation cumulative fetal loss rates.

DC gestation MC gestation 가 .  
 Twin to twin transfusion syndrome (TTTS) .  
 Selective growth retardation (SIUGR), Twin reversed arterial perfusion (TRAP),  
 Conjoined twin . TTTS MCDA placentation  
 MC twin 가 . TRAP  
 conjoined twin MCMA placentation mortality rate가  
 MC placentation

1. Chorionicity의 진단

Chorionicity 6-9  
 dichorionicity . yolk sac  
 가 heart beat monochorionicity .  
 amnionicity CRL 8-12 mm가 7 8 .  
 Dichorionicity placentation 10 가  
 lambda sign . 10 lambda sign  
 monochorionic placentation chorionicity  
 . 10 14 lambda sign 154 ,  
 lambda sign 16 98%, 20 87%  
 lambda sign 100% dichorionicity ,  
 dichorionicity 가 .

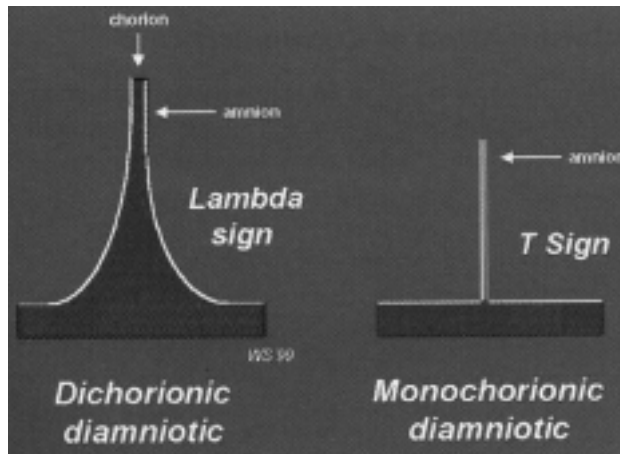


그림 3. Lambda sign.

2. Discordant twins

가 20% , Abdominal circumference가 20 mm 가  
 . perinatal morbidity, mortality가 .  
 DC gestation placental insufficiency , MC gestation  
 placenta angioarchitecture hemodynamic imbalance .  
 Twin to twin transfusion syndrome (TTTS) pseudo  
 TTTS selective IUGR .  
 MC gestation crown lump length disparity discordant twin  
 , CRL inter-twin disparity가 birth weight  
 discordancy , TTTS . adverse  
 outcome CRL inter-twin disparity

### 3. Twin to twin transfusion syndrome (TTTS)

TTTS MC gestation 15% , 가 20% ,  
 hemoglobin 가 5 g/dl , umbilical a. S/D ratio 가 0.4 ,  
 transplacental shunt , donor oligohydramnios recipient  
 polyhydramnios가 .  
 vascular anastomosis .  
 arteriovenous anastomosis . donor twin  
 recipient twin , donor growth restriction  
 stuck twin, hypovolemia, anemic oligohydramnios , recipient  
 larger fetus, hypervolemia, plethoric polyhydramnios .  
 TTTS twin oligohydramnios/ polyhydramnios sequence  
 (TOPS) .  
 TTTS stage .  
 Stage I poly/oligohydramnios가 donor ,  
 stage II donor , stage III  
 Doppler study , stage IV fetal hydrops , stage V  
 가 . Laser communicating  
 vessel coagulation , 가  
 , stage . stage

TTTS nuchal translucency (NT), membrane folding  
 . NT severe TTTS NT가 4  
 TTTS . Membrane folding donor oliguria amniotic  
 sac collapse가 . , membrane folding  
 50% severe TTTS 50% mild TTTS  
 . Membrane folding perinatal mortality

4. Single fetal demise

DC gestation MC gestation 3 . TTTS, cord  
 accident, placental abruption, maternal disease . monchorionic  
 monoamniotic twin gestation cord entanglement  
 , velamentous insertion Twin gestation single gestation 6  
 . TTTS smaller twin (donor) larger twin (recipient)  
 . cord accident  
 . Larger twin blood hemoglobin hematocrit 가 hyperviscosity가  
 intravascular thrombosis .  
 Single fetal demise가 encephalomalacia neurologic  
 morbidity 12% .  
 thrombosis brain vascular occlusion hypotensive hypoxic insult  
 . Single fetal demise DIC

5. Acardiac Twins or Twin Reversed Arterial Perfusion (TRAP) sequence

Acardiac twin 1% 35000 1 .  
 Acardiac twin umbilical artery arterial-to-arterial anastomosis  
 . 가 arterial-to-arterial anastomosis blood recipient twin  
 recipient twin deoxygenated blood fetal  
 development multisystemic malformation  
 amorphous appearance .  
 Acardiac twin upper part lower part  
 pump twin deoxygenated blood acardiac twin umbilical artery  
 가 iliac a. aorta 가 .  
 Acardiac fetus 33% monosomy, trisomy, deletion, mosaicism, polypoid  
 .  
 limb movement anencephaly, omphalocele upper limb  
 . Doppler study arterial-to-arterial anastomosis  
 reversed arterial perfusion .  
 Pump twin 8.8% trisomy , fetal cardiac overload  
 hepatomegaly congestive heart failure .  
 hydramnios, preterm delivery 가 .



그림 4. Acardiac twin

6. Monoamniotic twins

Monozygotic twins 1% , perinatal mortality  
 , perinatal mortality ,  
 IUGR, vascular anastomosis, cord entanglement .  
 , 가 twin dividing membrane  
 가 , inter-twin membrane  
 , color flow imaging cord entanglement . invasive  
 technique amniography MCMA . 61% iopamidol, 30 ml  
 amniotic cavity 24 X-ray 가 contrast  
 media . monoamniotic twin  
 3 cord accident  
 amnionity .

7. Conjoined twin

Conjoined twin incidence . Thoracopagus 가  
 가 omphalopaus xiphopagus conjoined twin 75% .  
 25% pygopagus가 , 5%가 ischiopagus , craniopagus가 가

Cojoined twin first trimester fetal pole  
 , inter-twin membrane , fetal body 가 , fetal  
 anomalies , umbilical cord가 3 vessel , head  
 plane body plane , spine extension ,  
 가 .

ultrasonography가 가 standard tool , fetal echocardiography MRI anatomical evaluation

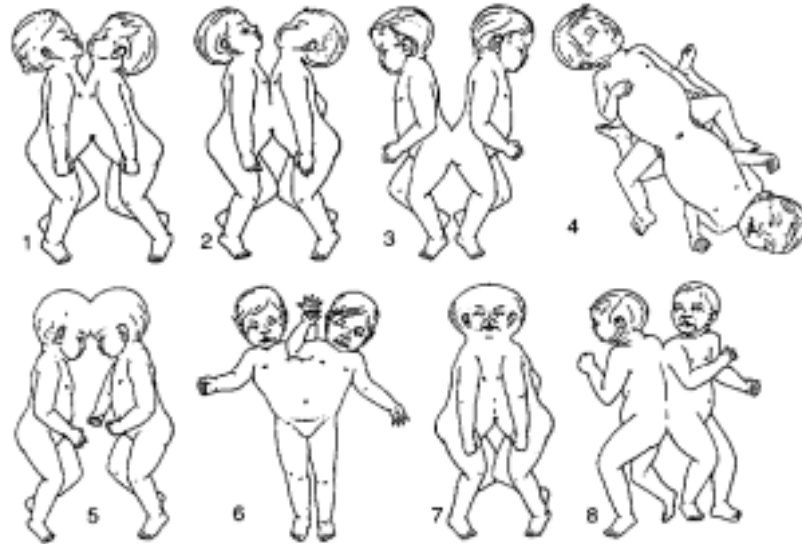


그림 5. Conjoined twin | 여러 형태

- 1. thoracopagus, 2. omphalopagus, 3. pygopagus
- 4. ischiopagus, 5. craniopagus, 6. parapagus
- 7. cephalopagus, 8. rachipagus

monozygotic twin gestation    singleton gestation    dichorionic twin gestation

가

## 참고문헌

1. Sebire NJ, Sepulveda W, Jeanty P, Nyberg DA, Nicholaides KH. Multiple pregnancy. In: Nyberg DA, McGahan JP, Pretorius DH, Pilu G eds, Diagnostic imaging of fetal anomalies, Lippincott Williams & Wilkins 2003:777-813.
2. Barth RA, Crowe HC. Ultrasound Evaluation of Multiple Pregnancy. In: Callen PW eds, Ultrasonography in Obstetrics and Gynecology, 4th ed, W.B Saunders Company 2000:171-205.
3. Nicholaides KH, Sebire NJ, Snijders RJM. Multiple pregnancy. In: Nicholaides KH, Sebire NJ, Snijders RJM eds, The 11-14 weeks scan, The diagnosis of fetal abnormalities, The parthenon Publishing Group 1999: 149-186.
4. Lewi L, Schoubroeck DV, Gratacos E, et al. Monochorionic diamniotic twins: complication and management options. Curr Opin Obstet Gynecol 2003;15:177-194.
5. Gaziano E, Lia JE, Kuhlmann RS. Diamniotic monochorionic twin gestation: an overview. J Matern-Fetal Med 2000;9:89-96.