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| Table 1. Clinical features and outcomes of the cases (n=11) |
| 　 | Classification | GA | Shunt | FGR | Cardiac anomalies | Edema |  Anomalies associated | Karyotype | CNV-seq | Pregnancy outcome | Shunt closure |  |
| Growth and development after birth |
| Case1 | DVSS | 18W | DV-IVC | No |  No  | No | Absence of nasal bone | 47，XN+21 | Normal | TOP | / | / |
| Case2 | DVSS | 23W | DV-IVC | No |  No | No | No | Normal | Normal | Premature delivery by cesarean section | 1 month after birth | Normal |
|
| Case3 | DVSS | 23+4W | DV-MHV | No |  No | No | Multiple hemivertebrae with scoliosis  | / | / | TOP | / | / |
| Case4 | DVSS | 24+4W | DV-IVC | Yes |  No | No | Polydactylism | Normal | Normal | Premature delivery by cesarean section | 1 month after birth | Normal |
|
| Case5 | EHPSS | 24+4W | UV-DV | No | Congestive heart failure | Yes | No | / | / | TOP | / | / |
| Case6 | IHPSS | 26+4W | LPV-LHV | No |  No | No | No | Normal | Normal | Term delivery by cesarean section (breech presentation) | 4 months after birth | Normal |
|
| Case7 | IHPSS | 35+4W | LPV-MHV | Yes | CTR: 0.42 | No | No | / | / | Premature delivery by cesarean section | 4 months after birth | Normal |
| LPV-RHV |
| Case8 | IHPSS | 36+5W | LPV-MHV(2 branches )，combined with UV-MHV (multiple branches) | No | CTR: 0.46 | No | No | / | / | Premature delivery by cesarean section | 1 month after birth | Normal |
|
| Case9 | IHPSS | 30+1W | LPV-MHV | No |  No  | No | No | / | / | Premature delivery via vaginal delivery (PPROM) | 6 months after birth | Normal |
|
| Case10 | IHPSS | 35+1W | LPV-MHV | Yes | Congestive heart failure  | No | Possible encephaledema  | Normal | Normal | Premature delivery by cesarean section | 6 months after birth | Normal |
| LPV-RHV |
| LPV-LHV |
| Case11 | IHPSS | 34+4W | LPV-LHV | Yes | CTR: 0.42 | No | No | Normal | Normal | Premature delivery by cesarean section(oligoamnios) | 6 months after birth | Normal |
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a.LPV-LHV: Left portal vein to left hepatic vein (shunt between the left branch of the portal vein and the left hepatic vein)

b.LPV-MHV: Left portal vein to middle hepatic vein (shunt between the left branch of the portal vein and the middle hepatic vein)

c.LPV-RHV: Left portal vein to right hepatic vein (shunt between the left branch of the portal vein and the right hepatic vein)

d.UV-MHV: Umbilical vein to middle hepatic vein (shunt between umbilical vein and middle hepatic vein)

e.UV-DV: Umbilical vein to ductus venosus (shunt between umbilical vein and ductus venosus)

f.DV-IVC: Ductus venosus to inferior vena cava (shunt between ductus venosus and inferior vena cava)

j. DV-MHV: Ductus venosus to middle hepatic vein (shunt between Ductus venosus and the middle hepatic vein)

h.FGR: Fetal growth restriction

i.GA: Gestational age

j.TOP: Termination of pregnancy

CTR: cardiothoracic ratio