Introduction

Transposition of the great arteries with intact ventricular septum (TGA/IVS) is one of the most common cyanotic congenital heart diseases. We studied the nature flow of the fetuses with TGA/IVS in foramen ovale (PFO) and patent ductus arteriosus (PDA), and the frequency of PFO flow restriction and PDA flow retrograde, which is resulting in systemic hypoxemia and rapid progression to acidosis after delivery.

Methods

115 fetuses with TGA/IVS were reviewed, all fetuses had two or more fetal echocardiographic studies performed spanning the second and third trimesters of pregnancy at our center. Measurements included gestational age, fetal weight, middle cerebral artery pulsatility, umbilical artery pulsatility, cerebro-placental resistance ratio, uterine artery pulsatility, patent ductus arteriosus pulsatility, patent ductus arteriosus flow direction, presence of PDA and PFO flow restriction. Data were compared between the first and last fetal studies.

Conclusion

Fetuses with TGA/IVS are at risk of PFO restriction and PDA flow retrograde, our findings strongly suggest that fetuses with TGA/IVS should be underwent serial fetal echocardiographic studies and intensive care in special delivery unit after delivery.