

Acardiac fetus in a triplet pregnancy: A rare case report

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Abstract

Acardiac twinning is a rare complication of monozygotic multifetal gestation that is thought to be the consequence of twin reversal arterial perfusion syndrome. In our case an acardiac fetus in a triplet is presented. This case was undiagnosed triplet pregnancy. Despite advances in diagnostic modalities and prenatal care, many times the complications associated with multifetal pregnancies may remain undiagnosed. Complications are more with monochorionic twin gestation due to placental sharing “twin reversed arterial perfusion sequence or “acardiac twin” is one such complication. This case report presents an antenatal undiagnosed dichorionic diamniotic, monochorionic diamniotic triplet pregnancy this case report presents an antenatally undiagnosed monochorionic pregnancy, resulting in preterm delivery of healthy normal two babies along with an acardiac acephalus fetus.

Keywords: Acardiac acephalus, monochorionic, twin reversed arterial perfusion. Triplets

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INTRODUCTION

Monochorionic twinning often results in a number of serious complications due to sharing of a common placenta and abnormal placental vascular anastomosis between the twins. One such rare, serious complications in “twin reversed arterial perfusion” (TRAP) sequence, also known as “acardiac twin”. Acardiac twin lack a heart and may have associated failure of head and limb growth along with a spectrum of various other anomalies. This case report presents an antenatally undiagnosed triplet pregnancy resulting in preterm delivery of healthy normal two fetuses with an acardiac acephalus fetus.

CASE REPORT

25 years old gravida 3 para 2, previous 2 caesarean section. All spontaneous conception with both living booked outside, presented at 34 weeks pregnancy with preeclampsia with preterm labour. Emergency caesarean section done. Fetus 1-male fetus of birth weight 1.6kg delivered by breech, fetus-2 male fetus of birth weight 1.5kg delivered by vertex. Fetus-3 acardiac, acephalic birth weight 1kg delivered. Both fetus-1 and fetus-2 both male fetus externally appeared normal admitted to NICU as they were preterm and later discharged.

DISCUSSION

Acardiac twin or TRAP sequence is a very rarely encountered consequence of monochorionic multifetal gestation, incidence is 1 in 35,000 birth.

Twin to twin transfusion, hinders the organogenesis in the acardiac receiver twin. Even the acardiac twin is a fetus with serious malformations, lacking most of the organs, especially the heart, during pregnancy it grows via the arterioarterial and venovenous placental anastomosis from the pump twin and is 50% of the cases perinatal death of the constitutionally normal twin. Acardiac anomaly is more common in monozygotic female twin and mortality in 100%.

The acardiac twin may be of the following type based of degree of cephalic and truncal maldevelopment.

Acardius acephalus: failure of head and upper limb growth.

Acardius anceps: partially developed head with identifiable limbs.

Acardius acormus: the only developed structure is the head, and truncal structure essentially absent. This is a rarest variety.

Acardius amorphous: failure of any recognizable cephalic or truncal structure, least differentiated variety.

The pump twin, though structurally normal, may develop congestive cardiac failure and hydrops associated with preterm labour. Mortality is 50 to 70% in pump twin

and survival rate can be improved by early detection of monochorionic twining with acardia on ultra sonography and Doppler, treatment like radiofrequency or laser ablation of anastomotic vessels.

CONCLUSION

Acardiac twin is a rare, severe congenital malformation seen in monozygotic twin gestation, which is incompatible with life. Early detection of acardiac twin can be done in first trimester itself by ultra sonography and Doppler is essential for initiating timely treatment and preventing complications, such as cardiac failure in pump twin, preterm labour thereby improving the perinatal outcome.

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