



## **Title: Outcome of twin gestations discordant for major structural malformations of foetus. A retrospective descriptive study.**



**Introduction:** The prevalence of anomalies in dichorionic twins is same as singleton pregnancy i.e. 2%. So the individual risk per fetus in DADC twins is 4%, which is double that of singleton. The prevalence of anomalies in monochorionic twins is 4% and hence the risk per fetus is 8%, which is four times the risk in singleton. Of these anomalies, 80-90% are discordant, i.e. either only fetus is affected with anomaly or both the fetuses are affected with different anomalies.

The increased rate of malformations in dizygotic twins is explained by the presence of two different foetuses in same pregnancy thus increasing the chance as well as factors related to overcrowding, nutrition etc.

Malformation rates in Monozygotic twins are even higher due to additional factors such as, defects in early divisions, mutations occurring after division of the fertilized egg and shared circulation.

While minor anomalies need no special interventions as these do not adversely affect the co-twin, major anomalies can make antenatal management more challenging.

The anomalous foetus and the decisions made about its management could affect the normal co-twin, adding to the already increased perinatal morbidity and mortality in twin gestations.

It is important to study the type of anomalies affecting twin pregnancies along with their survival rate and the associated morbidities such as intrauterine death or premature birth.

**Objective** - To study the types of discordant anomalies in twin pregnancies and their perinatal outcome.

**Materials & Methodology** : It is a retrospective analysis of all twin pregnancies with diagnosis of discordant anomaly diagnosed on ultrasound and confirmed after delivery or termination over 10 years from 2014 to 2023 at JIPMER, Puducherry. The findings secondary to TTTS and TRAP sequence were excluded from the study. The demographic details, antenatal course of pregnancy, any intervention done and perinatal outcome in the form of NICU admission, neonatal surgery and mortality of either twins were studied.

**Conclusion** : While the neonatal survival of anomalous twin is low, the survival of normal co-twin is high even after expectant management.

**Results** – The prevalence of discordant anomalies in twin pregnancies at our institute was 1.75% (n=60/3411). Out of these, the majority (70%) were dichorionic twins and 30% (n=18) were monochorionic twins. The major system involved were either CNS or cardiovascular system. Only three pregnancies had diagnosis in first trimester and majority were detected at the time of target scan at 18-20 weeks and 21/58 (36.2%) were detected after 24 weeks. Three DADC twins underwent selective fetal reduction : two had anencephaly and one had cloacal dystrophy. The neonatal survival rate of the anomalous co-twins at one month after birth was only 33% (n=18/54), while it was 88.3% for normal co-twins.