



BFMC

Prediction of antenatal complications in monochorionic diamniotic (MCDA) twin pregnancies at the 11 - 13+6 weeks' scan

Thakar S¹, Chowhan S, Acharya V, Shettikeri A, Radhakrishnan P*

Bangalore Fetal Medicine Centre, Bangalore, India

- Monochorionic diamniotic (MCDA) twin pregnancies can be associated with adverse perinatal outcomes ie, Twin to twin transfusion syndrome (TTTS), Selective fetal growth restriction (sFGR), Intrauterine fetal demise (IUFD).
- At 11 to 13+6 weeks scan following inter-twin discordances of CRL, NT and abdominal circumferences may have a role in early prediction of these outcomes.
- Accurate prediction and early detections of these complications may offer an opportunity for timely intervention thus improving the outcomes

Aim : To evaluate the relationship between d-CRL, d-NT, d-AC measurements at 11 to 13+6 weeks' scan and the development of antenatal complications namely, TTTS, sFGR and single/double IUFD

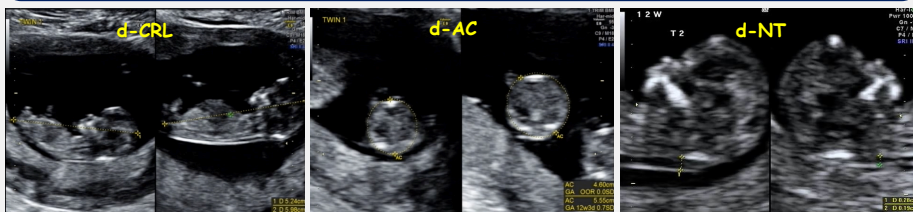
Materials and Methods

Study period : Nov 2006 - Feb 2017

No of MCDA pregnancies analyzed (No Structural defects) : 121

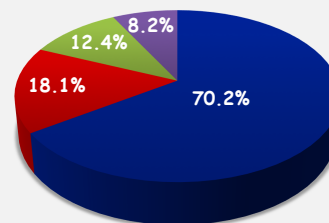
Markers analyzed : d-NT \geq 10%, d-CRL \geq 10%, d-AC \geq 10%

Outcomes analyzed : TTTS, sFGR, Single/ Double IUFD



MCDA Twin pregnancies analyzed

N = 121



No complications

sFGR

TTTS

IUFD

Conclusions

- Presence of at least 2 markers at 11-13+6 weeks scan could predict antenatal complications in majority of such pregnancies
- Combination of d-NT and d-AC is the strongest predictor and it predicted complications in 80% of such pregnancies
- d-CRL, d-NT and d-AC in isolation are poor predictors of antenatal complications

Discussion: We recommend inclusion of AC measurement in the routine assessment of MCDA twins in the first trimester along with CRL and NT. In the presence of discordancy of more than 1 parameter, a strict and close surveillance is likely to result in early detection of antenatal complications

References

- 1) Zipori, Y., Reidy, K., Gilchrist, T., Doyle, L., & Umstad, M. (2016). The Outcome of Monochorionic Diamniotic Twins Discordant at 11 to 13 6 Weeks' Gestation. *Twin Research and Human Genetics*, 19(6), 692-696. doi:10.1017/thg.2016.81
- 2) Allaf et al—Prediction of Outcomes in Monochorionic Diamniotic Twin Pregnancies. *J Ultrasound Med* 2014; 33:135-140.
- 3) Memmo A, Dias T et al Prediction of selective fetal growth restriction and twin-to-twin transfusion syndrome in monochorionic twins. *BJOG*. 2012 Mar;119(4):417-21. doi: 10.1111/j.1471-0528.2011.03250.x.

Markers present	Developed at least 1 complication	Complications detected before 20 weeks
At least 2 markers 24/121 (19.8%)	17/24 (70.8%)	13/17 (76.4%)
d-NT + d-AC 10/121 (8.2%)	8/10 (80%)	6/8 (75%)
Isolated marker 60/121 (49.5%)	13/60 (21.6%)	7/13 (53.5%)
No marker 37/121 (30.6%)	6/37 (16.2%)	2/6 (33.3%)