Dichorionic triplet pregnancies: Expectant management vs reduction with radio frequency ablation

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Objective
Dichorionic triplet pregnancies are associated with increased adverse perinatal outcomes in comparison to twin and trichorionic pregnancies. There has been an increased incidence of these pregnancies since the introduction of Day 5 blastocyst transfer in assisted conception. Reduction of one monochorionic twin (MC) with Radio Frequency Ablation (RFA) can reduce the rate of preterm delivery by allowing the pregnancy to proceed as a dichorionic twin pregnancy. The objective of this study is to compare the perinatal outcomes for dichorionic triplet pregnancies managed expectantly or with RFA fetal reduction at the Fetal Medicine Unit (FMU) of University College London Hospital (UCLH).

Methods
This was a retrospective review of dichorionic triplet pregnancies managed by the FMU of UCLH from 1 January 2015 to 31 December 2018. We analysed the outcomes of three groups: expectant management, fetal reduction (FR) to twins and FR to singleton. Outcome measures included miscarriage, fetal loss, gestational age at delivery, method of delivery, birth weight, and the need for neonatal intensive care unit stay.

Results
70 dichorionic triplet pregnancies were identified. 84% resulted from assisted reproductive technology. 26 pregnancies underwent FR to twins, 7 pregnancies underwent FR to singleton and the remaining 37 had expectant management. The mean gestational age at delivery was 32\text{+1} weeks for expectant management, 34\text{+3} weeks for FR to twins and 37\text{+6} weeks for FR to singleton. There was 1 intrauterine fetal death (IUFD) of the co-twin following FR to twins. There were 9 cases of IUFD in the expectant management group: 2 were double IUFDs of the MCDA pair, 2 were single IUFDs following twin-twin transfusion syndrome and 5 were single IUFDs of one MC twin. There were 2 miscarriages in the expectant management group and no miscarriages after FR to twins or singleton.

Conclusion
Fetal reduction with RFA can prolong the pregnancy with a relatively small risk of miscarriage or fetal loss. Expectant management is associated with high risk of perinatal mortality.