

# EP13.03 Dose polyhydramnios without TTTS really matters in monochorionic diamniotic twins?

Xiaofei Li, Qingqing Wu  
Department of Ultrasound, Beijing Obstetrics and Gynecology Hospital, Capital Medical University, Beijing  
Maternal and Child Health Care Hospital, Beijing, China.

## Objective

To investigate the association between initial ultrasound findings of polyhydramnios but do not meet twin-twin transfusion syndrome (TTTS) criteria , and adverse pregnancy outcomes in monochorionic diamniotic (MCDA) twins.

## Methods

We performed a retrospective study of MCDA twins booked at Beijing Obstetrics and Gynecology Hospital from 2018 to 2023. Cases with polyhydramnios but not meeting TTTS criteria were matched 1:2 with controls having normal AFV by gestational age and maternal age. Excluded pregnancies with fetal anomalies, twin reversed arterial perfusion sequence, initial TTTS findings, only one scan available, or higher-order pregnancies. We compared complication rates, gestational age at intervention or delivery, fetal survival rates, and ongoing pregnancy duration from initial ultrasound to intervention or delivery between the two groups.

## Results

A total of 126 MCDA twins were included in final analysis, comprising 42 in polyhydramnios group and 84 in control group. Compared to controls, the polyhydramnios group exhibited higher incidence of developed TTTS (7.1% vs 0.0%) , selective fetal growth restriction (23.8% vs 11.9%) and requiring intervention (11.9% vs 0.0%), but fetal survival rate was lower (90.5% vs 100.0%). Additionally, Polyhydramnios group had earlier gestational age at intervention or delivery (34.0 vs 36.0 weeks) and shorter ongoing pregnancy duration from initial ultrasound to intervention or delivery (7.0 vs 11.0 weeks). Kaplan-Meier analysis demonstrated that the difference in survival curve distribution between the two groups was statistically significant ( $p = 0.021$ ).

## Conclusion

Initial ultrasound findings of polyhydramnios in MCDA twins, even without meeting TTTS criteria, are associated with adverse pregnancy outcomes including complications, fetal interventions, fetal loss, and shorter ongoing pregnancy duration, and it should be considered a warning marker.

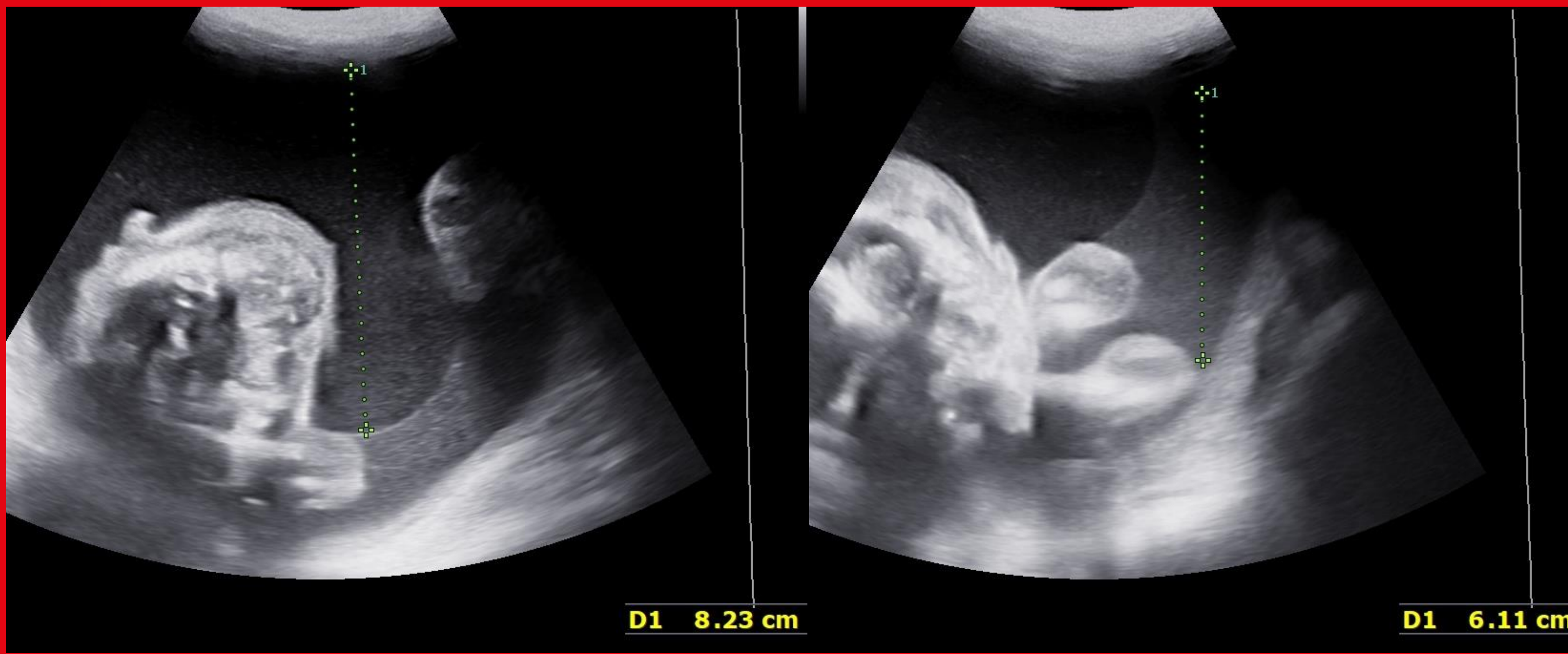


Figure 1. 24 weeks, MCDA twins, polyhydramnios of one twin, normal fluid in cotwin



Figure 2. 26weeks, same MCDA twins as in Figure1, fetal loss of the polyhydramnios twin

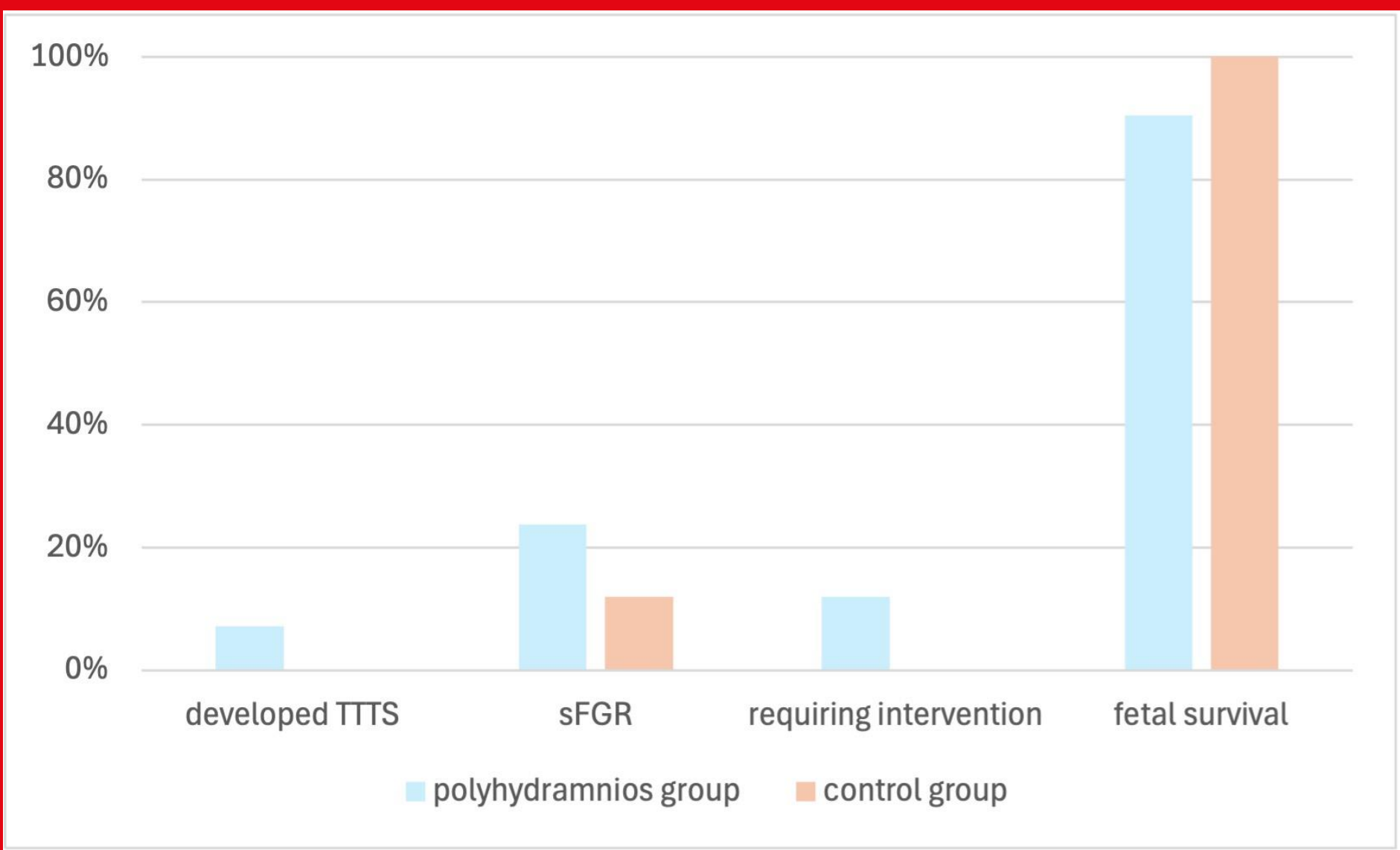


Figure 3. incidence of developed TTTS, selective fetal growth restriction(sFGR) , requiring intervention and fetal survival rate of two groups