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Abstracts

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Normal fetal growth and birthweight in monochorionic vs dichorionic twin pregnancy

Oliver Hugh, Jason Gardosi

Perinatal Institute, Birmingham, United Kingdom

Objective: There is ongoing debate as to whether monochorionic (MC) and dichorionic (DC) pregnancies require different growth charts. We wanted to quantify fetal weight and birthweight in twins with different chorionicities when pathological factors are excluded.

Methods: Our cohort included 2048 twins with recorded chorionicity. We collected data on maternal characteristics, scan-estimated fetal weight measurements and outcomes including birthweight and gestational age. Birthweights were compared using mixed-effects regression to quantify differences between MC and DC pregnancies. Fetal weight curves were modelled after excluding preterm and post-term births (<33+0 and >36+6 in MC pregnancies; <34+0 and >37+6 in DC pregnancies), discordance (>25%), stillbirths and maternal pathological factors. We created a model for each chorionicity using nested mixed-effects regression.

Results: The study cohort included 222 (22%) MC and 802 (78%) DC pregnancies, with an average gestational age at birth of 35+5 and 36+5 weeks, respectively. Analysis at 36 weeks, after adjustment for confounders, showed a difference between MC and DC birthweight of −3 g only (95% CI: −47.0 to 43.0). As shown in the Figure, the fetal weight curves overlapped until the MC trajectory started to decline from about 32–33 weeks.

Conclusion: After excluding pathological factors and adjusting for physiological variables, MC fetal growth appears to be similar to that in DC pregnancies, but is frequently complicated by late onset growth restriction. The results suggest that it is appropriate to use a dichorionic growth standard to monitor fetal growth of monochorionic twins.

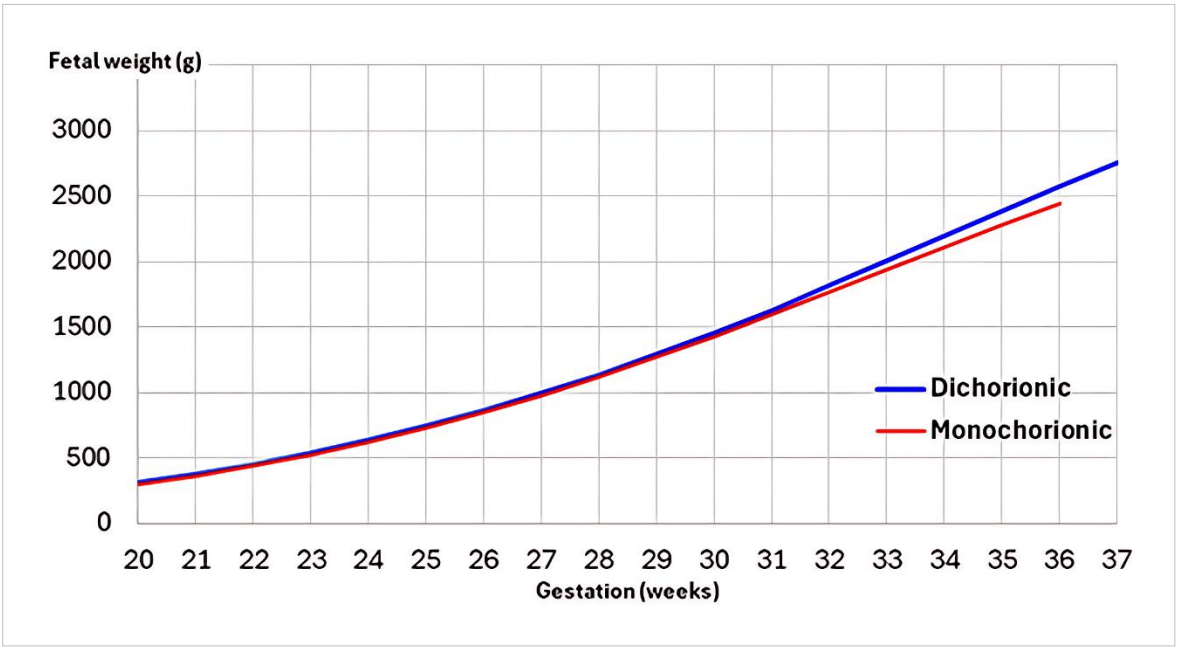
Fetal weight (g)
3000
2500
2000
1500
1000
500
0
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Gestation (weeks)
Dichorionic
Monochorionic

FIGURE 1