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Abstracts

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Accelerated growth identifies non-LGA pregnancies at risk of shoulder dystocia

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Objective: Large for gestational age (LGA) babies have an increased risk of intrapartum complications including shoulder dystocia. Recent development of the GROW velocity standard has shown improved prediction of adverse outcome following slow growth. We wanted to assess the contribution that accelerated growth can make in identifying risk of shoulder dystocia.

Design: Prospective observational study

Methods: The study cohort included 5953 singleton pregnancies with at least two third trimester scans and were managed with the new GROW 2.0 electronic charts. Growth velocity was assessed by the projected optimal weight range (POWR) method, as previously described [1]. The database had information on maternal characteristics, scan estimated fetal weights (EFW) and pregnancy outcome which included 54 deliveries (0.9%) with shoulder dystocia. We compared risk of shoulder dystocia following LGA (>90th customised centile) at last scan and following accelerated growth velocity between the last two scans. Significance was determined by relative risks (RR) with 95% confidence interval (CI).

Results: The median gestational age of the last two scans was 34+0 and 37+1 weeks, respectively, and 39+2 weeks at birth. 824 fetuses had an LGA EFW at last scan (13.8%), and 22 of these pregnancies had shoulder dystocia at delivery (RR 4.8; CI 2.7–8.4). In 634 of the 824 LGA fetuses (76.9%) there was no accelerated growth preceding the last scan, and 17 cases of shoulder dystocia (RR 4.8; CI 2.6–8.8). Accelerated growth between the last two scans occurred in 481 pregnancies (8.1%) and was followed by shoulder dystocia in 10 deliveries (RR 3.7; CI 1.8–7.7). Of these 481 fetuses with accelerated growth, 291 (60.5%) were not LGA at last scan, and 5 of their deliveries was complicated by shoulder dystocia (RR 3.1; CI 1.2–7.9).

Conclusion: LGA on ultrasound scan in late third trimester is associated with increased risk of shoulder dystocia. Accelerated growth on serial fetal weight assessment can identify additional pregnancies at risk that were not LGA antenatally.

Reference:

1. https://doi.org/10.1002/uog.24860