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Comparative effectiveness of routine one-off third trimester scan vs serial fundal height measurement in detecting small-for-gestational age

Emily Butler, Hanna Ellson, Amanda Merricks, Oliver Hugh, Jason Gardosi

Perinatal Institute, Birmingham, UK

Objective: There's been ongoing advocacy of routine one-off third-trimester ultrasound scans despite lack of evidence of benefit. We wanted to assess their effectiveness in detecting small for gestational age (SGA) babies.

Methods: We studied routinely recorded, anonymised data of singleton pregnancies in 47 NHS units from November 2024 to November 2025. Estimated fetal weight (EFW) was recorded in three categories:¹ low risk with a planned scan between 34.0 and 38.0 weeks ($N=2,912$);² low risk with serial fundal height (FH) measurement that prompted a scan ($N=21,931$);³ increased risk with serial scans ($N=46,041$). We analysed SGA rate (<10th centile) by EFW and birthweight, detection rate (DR) and false positive rate (FP). Centiles were by customised GROW standard without adjustment for sex.

Results: The routine one-off scans were done at a median 35+5 weeks. Screen positive rate was 3.2%, SGA rate at birth 7.5% and DR 25.7% – all significantly lower ($p < 0.05$) than for scans (at median 37+2 weeks) indicated by serial FH assessment, with screen positive rate of 10.8%, SGA at birth 13.2% and DR of 43.3%. Serially scanned pregnancies had higher screen positive rate (15.1%), SGA rate at birth (17.6%) and DR (52.4%). Table 1 compares the screening performance indicators.

Conclusion: One-off third-trimester scans applied routinely have significantly lower screen positive rates and detection rates for SGA birthweight than those based on serial fundal height measurements. Resources applied for such scans may be wasteful and better used in increased risk pregnancies, where surveillance by serial scans is clinically indicated.

Care pathway	Routine One-off Scan	Serial Fundal Height	Serial Scan
Screen positive rate, %	3.2	10.8	15.1
SGA rate at birth, %	7.5	13.2	17.6
Detection rate, %	25.7	43.3	52.4
False positive rate, %	1.4	5.9	7.2

Table 219.1