

EP08.17. Ultrasound estimates of fetal weight: accuracy in relation to birthweight deviation and maternal diabetes status

Ditte N Hansen, Anna T Lind, Sidsel L Ratchke, Jennifer Lindberg, Victoria Lindblad, Trine T Christensen, Anne Sørensen

Objectives

Ultrasound estimates of fetal weight (EFW) are important markers of pathological fetal growth and support clinical decisions regarding the timing and mode of delivery. However, the ultrasound EFW may be inaccurate. **The aim of this study was to investigate the accuracy of ultrasound EFW and its association with birth weight deviations and diabetes status.**

Methods

A total of 3,806 singleton pregnant women who gave birth at Aalborg University Hospital, with ultrasound EFW performed within two weeks prior to delivery, were included in the study. The accuracy of EFW was estimated as the mean percent error between ultrasound EFW deviation and birthweight deviation, with good accuracy defined as a difference of less than 10%. Accuracy was compared between birth weight groups SGA (birthweight<10th centile), LGA (birthweight>90th

Results

Good accuracy of EFW was present in 82% of SGA pregnancies, 81% of AGA pregnancies, and 52% of LGA pregnancies (marked by the horizontal lines at -10% and 10% difference in Figure 1). In SGA pregnancies, the EFW (%) was significantly overestimating BW (%) (3.1 ± 7.1 (mean difference \pm SD), whereas in both AGA pregnancies (-1.9 ± 7.6) and LGA pregnancies (-9.3 ± 10.3) the EFW (%) was significantly underestimating BW (%) (Figure 2 and Table 1). EFW accuracy was not associated with maternal diabetes status.

Conclusion

The accuracy of EFW depends on fetal size, regardless of diabetes status, with poor accuracy in LGA pregnancies. A systematic inaccuracy was revealed, as fetal weight was underestimated in LGA pregnancies and overestimated in SGA pregnancies.

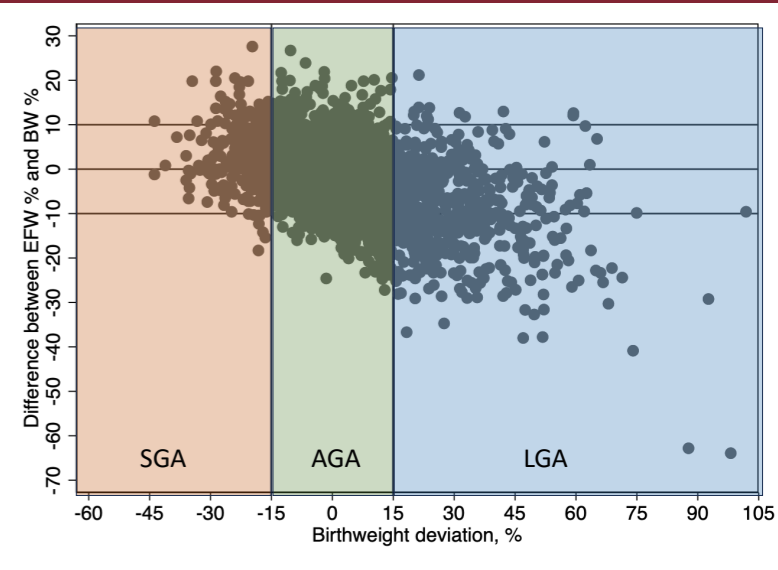


Figure 1

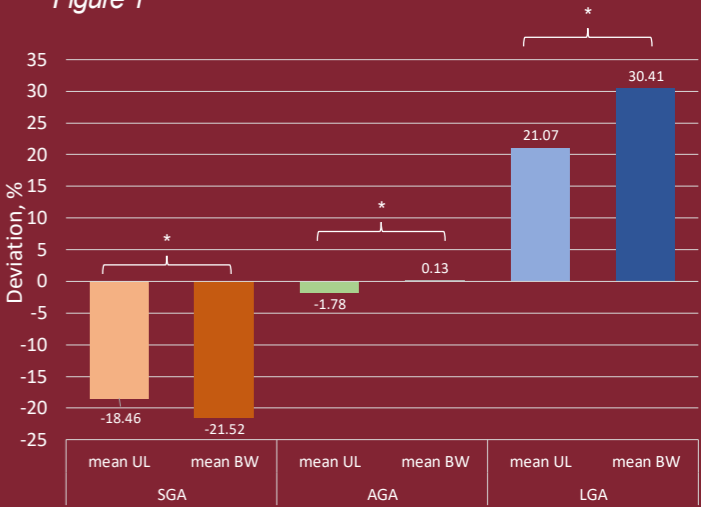


Figure 2

	SGA	AGA	LGA
Mean diff.	3.1 %	-1.9 %	-9.4 %
95% CI	2.2-3.9	-2.3- -1.6	-10.2- -8.5

Table 1 shows the mean difference between ultrasound estimated fetal weight and birthweight deviation and 95% confidence intervals for the three groups; SGA, AGA and LGA. * for significance.

Ditte Hansen