

Does placenta location have an effect on the accuracy of sonographic estimated fetal weight at term?

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Objective

The literature available concerning the relationship between placenta location and sonographic estimation of fetal weight (EFW) is scarce. Thus, we aimed to evaluate whether differences placenta location has any influence on sonographic EFW.

Methods

A retrospective cohort study. All term (37-41 weeks), singleton pregnancies which underwent an estimation of fetal weight (using abdominal circumference and femur length) and determination of placenta location in our sonar unit within a week from birth date were included. Cases were stratified into 4 categories according to placenta location: 1) Anterior (reference group), 2) Posterior, 3) Lateral (right or left) and 4) Fundal location. In cases in which there was a description of anterior, posterior or lateral/fundal placenta a preference was given to the anterior or posterior location rather than the lateral/fundal location. Inaccurate EFW was defined if there was more than absolute 15% difference between sonographic EFW and the actual birthweight.

Results

1) Overall, 1,908 pregnancies were identified (997, 787, 31 and 93 respectively). 2) Demographic data and gestational age (39.2±1, 39.2±1, 39.1±1 and 39.4±2 weeks, p=0.71) were similar between the groups. 3) Mean EFW was 3,359±535g, 3,337±535g, 3,145±483g and 3,399±570, p=0.13, respectively. 4) Mean birthweight was 3,232±537g, 3,257±580g, 3,124±460g and 3,265±582g, p=0.47, respectively. 4) Mean amniotic fluid index value was 104±86mm, 114±89mm, 86±80mm and 94±75mm, p=0.01, respectively. 5) Inaccurate EFW rate was similar between the groups (7.5%, 6.1%, 6.5% and 8.6%, p=0.62, respectively). 6) On multivariate analysis, placenta location wasn't associated with EFW accuracy (OR 0.84, 95% C.I 0.4-1.8, p=0.66 for posterior location, OR 0.64, 95% C.I 0.3-1.4, p=0.27 for lateral location and OR 0.77, 95% C.I 0.1-3.9, p=0.75 for fundal location).

Conclusion

Our data shows that for term, singleton pregnancies placenta location doesn't have any impact on EFW accuracy.