Introduction

Estimation of fetal weight have a major impact on obstetrical management. Proper fetal weight estimation (EFW) contributes to a reduction in neonatal mortality and morbidity as well as helps to identify fetuses affected by growth retardation and macrosomia. We aimed to evaluate the effect of selected factors on the accuracy of EFW.

Methods

We retrospectively analyzed data from pregnant women admitted to the hospital between 37 and 42 weeks of gestation who gave birth within 7 days following sonographic assessment of EFW. The following factors were analyzed: maternal BMI, AFI, fetal presentation, gestational age, and experience of a sonographer (resident or ob-gyn specialist). We would also like to check if our new residents can properly perform ultrasound measurements.

• The Wilcoxon rank sum test was used for comparison between groups. Correlations were described with Spearman's rank correlation coefficient.

Results

• The analysis included 251 examinations performed by the residents and by the specialists. The mean absolute value of the difference between EFW and birth weight was 250±198g.

• No significant difference was found between measurements performed by residents and specialist (249±191 and 272±244; p=0.8171); between women with BMI>30 and ≤30 (240±158 and 254±210; p=0.8359);

• pregnancies with AFI>5 and ≤5 (268±194 and 233±202; p=0.0725);

• term and post-term pregnancies (267±205 and 259±194; p=0.9344);

• pregnancies with vertex and breech presentation (257±201 and 189±154; p=0.0.1515).

• Correlations between the difference in weight and maternal age (r=0.07; p=0.2561), gestational age at delivery (r=0.1; p=0.1034) and BMI (r=0.04; p=0.5277) were insignificant as well.

Conclusion

The accuracy of the fetal weight estimation carried out within one week before delivery was not affected by described maternal and fetal factors.

First year resident can properly estimate fetal weight and results are similar to those, achieved by specialist.