



Estimation of fetal gestational age at 10-14 weeks: CRL or ?

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Objective

To compare the correlation of crown rump length (CRL) versus a combination of biparietal diameter (BPD), head circumference (HC), abdominal circumference (AC) and femur length (FL) for estimation of fetal gestation age at 10-14 weeks.

Methods

Fetal CRL, BPD, HC, AC, FL were obtained on routine Obstetric scans performed at 10-14 completed weeks' gestation in 35 pregnant women and compared to the estimated gestational age by date (GA) and the fetal foot length (FT).

Results

The fetal CRL, BPD, HC, AC and FL showed a linear correlation with GA ($R = 0.78, 0.83, 0.84, 0.88$ and 0.84 respectively) and FT ($R = 0.90, 0.94, 0.95, 0.95$ and 0.94 respectively) ($p < 0.001$). The correlation was the least with CRL. A combination of fetal BPD, HC, AC and FL correlated with GA or FT better without CRL ($R^2 = 0.817$ and 0.881 respectively), than with ($R^2 = 0.560$ and 0.685 respectively), and than CRL alone ($R^2 = 0.608$ and 0.81 respectively).

Conclusion

The fetal BPD, HC, AC and FL correlate better with GA and FT in the estimation of fetal gestational age compared with CRL alone or in combination with CRL at 10-14 weeks gestation.