Biorbital and interorbital distances at 19-23 weeks and correlation with craniofacial structures

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Objective
We aimed to determine the normal ranges for biorbital (BOD) and interorbital distances (IOD) during second trimester in normal Turkish pregnancies; and to assess the correlation between BOD, IOD and other fetal craniofacial structures and biometric parameters.

Methods
Our retrospective study consisted of 1328 singleton normal pregnancies who had USG examinations at 19-23 weeks of gestation for second trimester screening. The measurements of BOD and IOD were obtained with the coronal section of the fetal face at the plane of orbitas.

Results
Mean BOD was 3.4±0.33 cm. Mean IOD was 1.28±0.24 cm. Correlation analysis revealed that BOD was significantly correlated with IOD, transcerebellar diameter (TCD), cisterna magna (CM), nuchal fold (NF), nasal bone (NB), biparietal diameter (BPD), head circumference (HC), abdominal circumference (AC), femur length (FL), and gestational week. There was significant relation between IOD and lateral ventricle posterior horn, TCD, CM, NF, NB, BPD, HC, AC, and FL.

Conclusion
These reference ranges obtained in our study enable to accurate evaluation of BOD and IOD in normal second trimester pregnancies. USG detection of fetal orbital biometric anomalies should have an assessment for different anomalies associated with abnormal development of eye.