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An Assessment of Femur Growth Parameters in Human Fetuses and Their Relationship to Gestational Age

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**Abstract:** Fetal femur length assessment has been the subject of numerous investigations. Skeletal growth disturbances, estimation of fetal gestational age, developmental abnormality and detection of certain fetal congenital anomalies, and determination of population growth characteristics have been the objectives of different investigators' studies. The purpose of this study was to evaluate the relationships between the crown-rump length (CRL) and fetal femur growth parameters and the gestational age during the second and third trimesters. Thirty dead normal immature and premature fetuses were selected from the fetal collection at the Anatomy Department of the Medical School, Selçuk University. Depending on the fetal CRL and according to the Polin and Fox criteria, the fetal gestational age at the time of delivery was between 20 and 32 weeks. There were 15 male fetuses and 15 females. Each sex group included nine second-trimester and six third-trimester fetuses. A total of eight parametric variables were obtained from bilateral femora using a sliding caliper. Obtained data were statistically analyzed by Student's t-test and Pearson correlation coefficients. A significant relationship between the studied fetal growth parameters and the gestational age was found. From analysis of the data, it appears that fetal CRL and femur growth parameters are accurate for the calculation of gestational age.

**Key Words:** Fetuses, Growth parameters, Femur, Development

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