

ULTRASOUND BIOMETRY OF ARABIAN FETUSES

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ABSTRACT:

Objective: To establish fetal ultrasound biometry charts for Arabian fetuses between 14 and 40 weeks of gestation.

Method: Cross sectional fetal ultrasound data of normal singleton pregnancies, which had been performed over a period of seven years, were retrieved. Only pregnant Arab Women with certain last menstrual period dates and/or early ultrasound examinations were included. Each fetus contributed to only one set of data. Normal ranges for Biparietal Diameter (BPD), Head circumference (HC), Abdominal Circumference (AC), and femur Length (FL) were established. The mean, 5th and 95th percentiles at 18th, 28th, and 36 weeks of gestation were compared with similar ranges of published data from pregnancies of American and Anglo-Saxon population.

Results: Fetal ultrasound biometry has been established for our local population. Comparing our data with Western population emphasizes the presence of significant variation in fetal morphometric measurements particularly in the later weeks of gestation and at the extremes of the range of fetal size.

Conclusion: The clinical significance of this variation differs according to the primary objective of ultrasound fetal measurements. For estimation of fetal age, usually by head and femur measurements in early gestation, ethnic variation

seems to have limited significance. Whereas for estimation of fetal growth and/or weight in the third trimester, based on abdominal circumference, the use of given points, e.g. 10th or 5th percentile derived from other population charts, has the potential of either over or under diagnosis of IUGR fetuses. The adoption of locally developed charts is recommended.

Key Words: Fetal Biometry, Fetal Ultrasound Charts, Biparietal Diameter, Head Circumference, Abdominal Circumference, Femur length.