The Continuum of Pregnancy: Fetal Metrics and Implications in the Second and Third Trimesters

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Ultrasound remains as the primary imaging tool in obstetrics practice. One of the main functions of an antenatal scan is to determine the gestational age of the foetus. As the establishment of the expected date of delivery is vital in the management of any pregnancy. In addition, the assessment of fetal biometrics; continues throughout the antenatal period till delivery. Various parts of the foetus are measured according to the period of gestation. After 16 weeks of gestation, the basic measurements of Biparietal Diameter (BPD), Head Circumference (HC), Abdominal Circumference (AC) and Femur Length (FL) dominate as standard parameters. Extended biometry, by way of measurement of other parts of the foetus, are often measured as required.

As a rule, all measurements are plotted on a growth graph to confirm the normalcy of its growth pattern. Though each fetus will have its own growth potential; the velocity of growth, as determined by serials scan reflects on the wellbeing of the fetus. Deviation from the normal growth velocity; as seen against the normograms of the local population points out growth patterns disorders. This in turn guides the management of the pregnancy in terms of frequency of surveillance and determining timing of delivery. In recent times, the third trimester scan has gained increased attention as a near mandatory scan. One of the main foci of the third trim scan is to identify late Fetal Growth Restriction (I-FGR). Early identification and delivery have been shown to improve perinatal outcomes. Fetal biometrics has also a very important role in the management of multiple pregnancies. This lecture will address an overview of the value of various gestation-based biometrics, basic and extended biometry, role of growth graphs, the need for continuity of assessment into the third trimester and common growth pattern disorders. This power of the ultrasound scan will continue to remain for its ability to assess fetal biometrics.