***Lecture 3*: "Intrauterine Growth Restriction: Etiologies, Diagnosis, and Management"**

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Intrauterine growth restriction (IUGR) is a syndrome that is marked by failure of the fetus to reach its growth potential with consequences that are related to the underlying disorder as well as the severity of fetal disease.[1] It constitutes one of the major complications of pregnancy associated with an increased risk of mortality and morbidity and long term adverse consequences extending into adult life.[2] This condition may be caused by maternal disease, fetal disease, or placental insufficiency. Diagnosis of IUGR is made by multiple modalities. Ultrasound biometry is the main diagnostic standard used in the identification of fetal growth restriction. Biometry, amniotic fluid assessment, and Doppler velocimetry are the current tools to monitor fetal growth and well-being. [3] Efforts to prevent IUGR have not been successful, including aspirin in low risk patients. However poor obstetric history, unexplained elevation of maternal serum alpha-fetoprotein in the second trimester, flat oral glucose tolerance test, and abnormal second trimester uterine artery Doppler velocimetry are important risk factors for IUGR. The management of IUGR consists of ante partum screening and diagnosis, fetal surveillance for detection of in utero compromise, as well as appropriate and timely intervention. This includes the fetal non-stress test, biophysical profile, amniotic fluid volume, Doppler velocimetry, and in rare cases invasive fetal testing by cordocentesis. The timing of delivery depends on gestational age and surveillance testing. Prematurity and its complications are one of the major outcomes of early delivery. Beyond 34 weeks gestation amniocentesis for fetal lung maturing can be used to direct timing of delivery. In spite of excellent management, undefined morbidity predetermined by the condition will occur.[1]

References

1) Baschat, *et al.* Intrauterine Growth Restriction in Obstetrics: Normal and Problem Pregnancies 5th Edition. Philadelphia, PA. Churchill Livingston 2007.
2) Maulik, D. Management of Fetal Growth Restriction: An Evidence-Based Approach. Clinical Obstetrics and Gynecology. 49(2) 320-334.
3) Turan, *et al.* Integrated Testing and Management in Fetal Growth Restriction. Seminars in Perinatology. 32: 194-200.