PRENATAL CARE

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SBMU

- The major goal of prenatal care is to ensure the birth of a healthy baby with minimal risk for the mother.
- Early, accurate estimation of gestational age
- ●Identification of the patient at risk for complications
- ●Ongoing evaluation of the health status of both mother and fetus
- ●Anticipation of problems and intervention, if possible, to prevent or minimize morbidity
- ●Patient education and communication
- Ideally, prenatal care is initiated by 10 weeks of gestation.

- The elements of the patient history include:

- ●Personal and demographic information
- ●Past obstetrical history
- ●Personal and family medical history
- ●Past surgical history
- ●Genetic history
- ●Menstrual and gynecological history
- ●Current pregnancy history
- ●Psychosocial information
- ●Travel information
- Conclude : high or low risk

LABORATORY TESTS

- 1-Rhesus type and antibody screen
- 2-Hematocrit or hemoglobin & MCV
- 3-Cervical cytology cancer screening
- 4-Rubella immunity & Varicella immunity
- 5-VDRL ,HIV, HBS Ag, HCV& other STD
- TSH
- U/A & U/C
- DM (high risk: BMI>30 , Hx of GDM or baby >4500, family Hx of DM)
- TB
- Evaluation for inherited disorders

ULTRASOUND EXAMINATION

- It is an accurate technique for determining gestational age, number of fetuses, fetal cardiac activity, and placental location

COMPONENTS OF A FIRST TRIMESTER ULTRASOUND EXAMINATION

- Gestational sac location and diameter (if no embryo identified)
- Presence or absence of a yolk sac (diameter)
- Presence or absence of an embryo
- Presence or absence of cardiac activity
- Crown rump length
- Number of embryos
- Amnionicity and chorionicity of multiple gestations
- Anatomic survey, as appropriate for gestational age*
- Evaluation of the uterus, adnexa, and cul-de-sac
- Cervical length

BETTER DETECTION OF ANEUPLOIDY

- Serum screening protocols are dependent upon accurate estimation of gestational age
- the combination of sonographic nuchal translucency measurement and maternal serum analyte assessment in the first trimester can detect over 90 percent of fetuses with Down syndrome, as well as some fetuses with other aneuploidies
- Better identification of multiple gestation
- The best screening in multiple pregnancy

COMPONENTS OF SECOND AND THIRD TRIMESTER ULTRASOUND EXAMINATIONS

- Presence or absence of fetal cardiac activity, fetal heart rate and rhythm
- Fetal number
- Fetal presentation
- Assessment of amniotic fluid volume
- Placental appearance and location
- Umbilical cord vessel number and placental insertion site, if technically possible
- Fetal biometry (biparietal diameter, head circumference, femoral length, abdominal circumference)
- Evaluation of the uterus, cervix, and adnexa when clinically appropriate
- Fetal anatomic survey*

THIRD TRIMESTER SONO

- biometry &AFI
- Fetal presentation
- BPP

- SCREENING TESTS (double ,Quad ,Integrated ,sequential ,contingent, CELL Free DNA)
- Diagnostic test

SCREENING TESTS

- In accordance with the American College of Obstetricians and Gynecologists all women should be offered aneuploidy screening before 20 weeks of gestation.
- A test that measures cell-free DNA in maternal blood is also available when result of Screen-test is positive

CANDIDATES FOR DIAGNOSTIC TESTING

- A diagnostic test rather than screening is a reasonable choice for women of any age at high risk of Down syndrome or other fetal aneuploidies, such as women with
- ●A previous pregnancy complicated by fetal trisomy
- ●At least one major or two minor fetal structural anomalies in the current pregnancy
- ●Chromosomal translocation, inversion, or aneuploidy in the pregnant woman or her partner

FIRST-TRIMESTER COMBINED TEST

- between 11 0/7ths and 13 6/7ths weeks of gestation
- Maternal serum beta human chorionic gonadotropin (beta-hCG)
- ●Maternal serum pregnancy-associated plasma protein-A (PAPP-A)
- ●Ultrasound measurement of nuchal translucency (NT) and presence of NB
- These three markers comprise the "combined test" and together with maternal age provide a patient-specific risk

- The serum integrated test is the same as the full integrated test, but without ultrasound measurement of nuchal translucency. This test provides an option to patients in areas where expertise in measurement of nuchal translucency is not available. It has the highest detection rate among screening tests that do not include nuchal translucency measurement or cell free DNA

INTEGRATED TESTS

- uses markers measured in both the first and second trimesters to provide a single estimate of risk for Down syndrome pregnancy.
- The information of combined test is kept on file until a second-trimester serum sample is drawn and the quadruple test markers are run (alpha fetoprotein [AFP], unconjugated estriol [uE3], inhibin A and beta-hCG). The six marker values are used, together with maternal age, to calculate a single risk for Down syndrome and a report is generated. The integrated test achieves an 85 percent detection rate

- The quadruple test is ideally performed at 15 to 18 weeks of gestation but can be done as late as 22 weeks

WOMEN CAN BE INFORMED

- The full integrated test (first-trimester NT, PAPP-A, and second-trimester AFP, uE3, beta-hCG, and inhibin A) is the most efficient screening test (high DR, low FPR).. Stepwise sequential screening, a variant of the integrated test, approximates the performance of the full integrated test and may be a valuable alternative because it reports very high risk results in the first trimester.

- If NT testing is not available, the serum integrated test (first-trimester PAPP-A and second-trimester AFP, uE3, beta-hCG, and inhibin A) is the next most efficient choice.

- The quadruple test (second-trimester AFP, uE3, beta-hCG, and inhibin A) is the best available option for women who present for prenatal care in the second trimester.

- First-trimester combined screening (NT, PAPP-A and beta-hCG) is a reasonable approach for women who desire earliest possible screening and diagnosis.

- The disadvantage of the integrated test is that final test results are not available until the second trimester. This problem can be largely mitigated by using a sequential approach, either step-wise or contingent

CELL FREE DNA

- Detection rate
- Indications

- Management of
- Screen Neg
- Screen pos

DIAGNOSTIC TEST

- CVS
- Amniocentesis

THANKS