Diagnosis of Early Pregnancy and the Initial Prenatal Visit

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Introduction

- More than 6 million women diagnosed each year[1]
- Millions more seek diagnostic testing
- Difficult to determine what percentage go on to live births
- Earlier diagnosis
  - May prompt earlier prenatal care
  - Benefit to the fetus (glycemic control, substance abuse)
  - Better estimation of gestational age and estimated date of delivery
  - More options for termination, if desired

Most Common Signs & Symptoms

- May begin as early as 3 weeks after conception
  - Amenorrhea
  - Nausea w/ or w/o vomiting
  - Breast tenderness
  - Urinary frequency and nocturia
  - Fatigue

Progesterone effects

- Stimulates respiratory center
  - Mild, gradual dyspnea
- Reduces intestinal motility and LES pressure
  - Bloating
  - Constipation
  - Heartburn

Diagnosis

- History
- Physical exam
- Lab test

Home Pregnancy Test

- Accuracy based on users' technique and interpretation
- Can be up to 99% accurate if used correctly
- A negative result should be repeated in 1wk
- Comparison of brands
  - "First Response Early Result" most sensitive

The First Prenatal Visit

- Once pregnancy is confirmed, a provider needs to be assigned
  - Provider continuity has shown to reduce interventions and increase satisfaction[2,3]
- Determine the Estimated Date of Delivery (EDD) using an accurate LMP or U/S
- History & Physical
  - Blood pressure
  - Weight with calculated BMI
  - Fundal height
  - Fetal heart tones

Labs

- Blood type and screen
- CBC
- Screening for syphilis, rubella, hep B and HIV
- Consider the following in high risk population: HepC, gonorrhea, Chlamydia
- Pap smear should be offered if due
- U/S should include NT if 10-14wks
- Genetic counseling and appropriate screening should be offered

Disease	Risk Group	Frequency	Test
Cystic fibrosis	Caucasians, Ashkenazi Jews	1 in 25-30	Molecular diagnostic testing
Tay-Sachs disease	Ashkenazi jews, cajuns, French Canadians	1 in 20-30	Serum hexosaminidase-A levels (non-pregnant)
Canavan's disease	Ashkenazi jews	1 in 40	Molecular diagnostic testing
α- and β-Thalassemia	Africans, South Asian, Hispanics, Mediterraneans, Middle Easterners, SE Asians	1 in 10-75	If MCV <80 then Hgb electrophoresis, ferritin, RBC morphology DNA analysis to detect α carriers
Sickle cell anemia	Africans	1 in 11	Hgb electrophoresis

Counseling

- Substance use: screen all women for use and discuss associated effects to the fetus
- Discuss workplace conditions and safety at work
- No hot tubs and saunas; esp. first trimester
- Exercise is okay but avoid risks for falls and abdominal injury
- Air travel okay up to 4wks before EDD
  - Consider quality of medical care at destination site
  - Caution with long flights and hypercoaguable state
- Review any medications she may be taking and consider alternatives if necessary
  - Start patient on PNV if not already taking
  - Patient should be encouraged to ask you before taking OTC meds

Nutrition

- How much weight should she gain?

BMI	Singleton	Twin
<18.5	28-40lbs	
18.5 – 24.9	1-5lbs in first trimester and 1lb/wk after	37-54 lbs
25-29.9	15-25 lbs	31-50 lbs
>30	11-20 lbs	25 – 42lbs

- Should increase caloric intake by 350-450 kcal/d in 2nd and 3rd trimesters

Nutrition

- Calcium
  - Recommended intake is 1,000 – 1,300mg/d
  - Shown to decrease blood pressure and preeclampsia
  - No proven effect on perinatal mortality
  - May be beneficial for women at high risk for gHTN
- Folic acid supplementation 4wks preconception to at least 12wks to prevent NTDs
- Iron supplementation for Fe deficiency anemia
- Limit Vitamin A to no more than 10,000 IU

Food Safety

- Limit caffeine to 150-300mg per day (B)
- Avoid soft cheese (feta, Brie, blue cheeses, queso fresco) (C)
- Avoid raw eggs and raw egg products (eggnog, cookie dough) (C)
- Wash all raw vegetables and fruits (C)
- No uncooked meat or pate (C)
- Seafood caution (B)
- Avoid saccharin containing products (C)
  - Sweet n' Low
  - Known to cross the placenta and may remain in fetal tissue

Breastfeeding

- Anytime is a great time to talk about breastfeeding!
- Most women will have preconceptions about breastfeeding from family, friends etc.
- Inform the patient so she can decide what's best for her and her baby
- Contraindications: HIV, chemical dependency, active HSV on the breast bilaterally, certain medications
- Structured behavior counseling and education programs can increase awareness and success[4,5]

Questions?