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Disclosures

- Myovant Sciences Consultation 2022
- No other disclosures

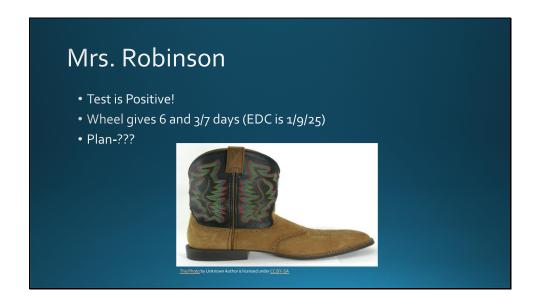
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Objectives

- 1. Review early pregnancy management for the primary care provider
- 2. Develop a care plan for pregnant patients with common comorbid conditions
- 3. Describe recommended diagnostic testing for pregnant patients in first and early second trimester
- 4. Develop a management plan for patients with first trimester complications

Mrs. Robinson

- J. Robinson, 31 yo G2P2, LMP April 4 presents to office for pregnancy test
- PMH: allergic rhinitis
- Meds: Cetirizine 10 mg
- Allergies: NDKA, pollens
- Surgeries: None
- FH: M HTN, F CVA 76, S hypothyroidism
- Social: occ Etoh, denies smoking or illicit drugs. 4th grade teacher.



Maternal Morbidity in the USA

| Year | Deaths | MMR/1000 Live Births | MMR/Blacks | MMR/40+ |
|------|--------|-------------------------|------------|---------|
| 2021 | 1205 | 32.9 | 69.9 | 138.5 |
| 2020 | 861 | 23.8 | 55.3 | 107.9 |
| 2019 | 754 | 20.1 | 44.0 | 75.5 |

Hoyert DL. Maternal mortality rates in the United States. NCHS Health E-Stats. https://dx.doi.org/10.15620/cdc:113967

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Maternity Care Deserts

- No access: Any county in the US without a hospital or birth center offering obstetric care and without any obstetric providers
- Low access: one or fewer hospitals that provide OB care, less than 60/10K births for providers, or less than 10% of women without health insurance
- Moderate access: more than one hospital but not many, not many providers for 10K births, still less than 10% of women who are reproductive age without health insurance

https://www.marchofdimes.org/peristats/

| laternity Care | e Deserts, Florida | Edition |
|----------------|--------------------|---------|
| County | Access | |
| Levy | Low Access | |
| Dixie | Desert | |
| Gilchrist | Desert | |
| Bradford | Low Access | |
| Suwanee | Low Access | |
| Jefferson | Desert | |
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Initiation of Prenatal Care

- Ideally by 10 weeks of gestation
 - Not being met in US or worldwide
 - WHO estimates less than 60% of people worldwide get care by 12 weeks
 - Income dependent
 - Early initiation of care allows for accurate dating, baseline measurements, and intervention for depression, diabetes, hypertension, and other conditions
 - Evaluation of social and other environmental aspects of the pregnancy



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Know Your Options

- Continuation of Pregnancy
 - Initiation of Obstetrical Visit
- Termination of Pregnancy
 - Referral for Services
 - Post-procedure follow up
- Continuation with Plans for Adoption
 - Initiation of Obstetrical Visit
 - Referral for Services
 - Co-management of patient

Routine Pregnancy- The History

- Complete Medical History
- Attention to immunizations
- Genetic disorders
- Obstetric and Gynecologic history in detail
- Social with workplace exposures, substances, support for pregnancy
- Mental Health History
- ROS

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Updated in 2023-Mental Health Screening

- Full Screening at Initial visit, midway, and postpartum using PHQ-9 and then Edinburgh Postnatal Depression Scale
- Additionally assess life stressors
- Regular screening for intimate partner violence
- Status of any children living now/location
- Screen for prior sexual trauma
- Screen for prior birth trauma

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Physical Exam-Initial

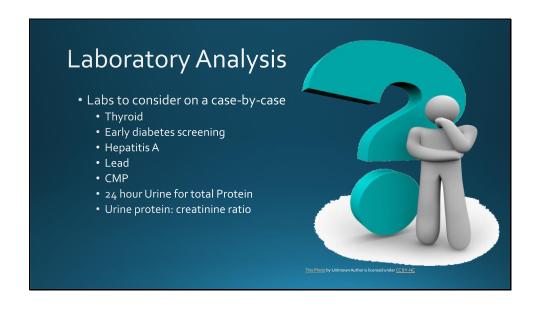
- Vitals (baseline vitals critical)
- Complete physical exam
- GYN exam: size, shape, position of uterus and adnexa
 - Fetal cardiac activity using Doppler if over 12 weeks
 - Ultrasound if under
- Urine dipstick analysis in office for glucose, protein

Physical Exam-Subsequent

- Vitals
- •Fundal Heights using tape measure
- Urine dipstick
- •Fetal Heart Tones using hand held doppler

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Laboratory Analysis Routine: CBC with differential ABO/RH type Antibody Screen HIV ½ antibodies Urine culture Pap Smear if not current RPR diagnostic Hepatitis C Hep B Surface Antibody Rubella Varicella Chlamydia/Gonorrhea



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Ultrasound

- Evaluation by Crown Rump Length (CRL)
- Most accurate biometric predictor of fetal age
- Can compare to Last Menstrual Period
 - In 1st trimester if CRL is within 1 week, LMP is thought to be correct
 - In 2nd trimester, range goes out to 10 days
 - In 3rd trimester, range goes out to 3-4 weeks
- Very important when menses differ than 28 days, LMP unknown, OCPs, exam discrepancy

Genetics

- Chorionic Villus Sampling (done at 10-13 weeks)
- Amniocentesis (done at 15-16 weeks)
- Serology (cell-free DNA or maternal serum levels of biochemical markers)
- First Trimester Nuchal Fold thickness
 - Done in combination with either cell-free DNA testing or maternal biochemical markers
- Detailed anatomy scan at 18-20 weeks

Carrier Screening (most common)

- Cystic Fibrosis
- Hemoglobinopathies
 - Most commonly thalassemias and Sickle Cell Disease
 - Patients with MCV less than 80 and no overt IDA should be screened for thalassemia
- Tay Sachs

Common Issues

- Hypertension
 - Chronic
 - Gestational
- Diabetes
 - Chronic
 - Gestational
- Bleeding in Pregnancy
- Hyperemesis

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Bleeding in Pregnancy-Molar

- Persistent bleeding that worsens accompanied by significant nausea and vomiting
- Rapid weight gain
- US shows enlarged uterus inconsistent with dates, no FHT, markedly elevated BHCG, theca-lutein cysts in ovaries
- Referral to OB urgently
- Referral to OB if these patients become pregnant again in first 6 months or 1 year following Molar pregnancy

Bleeding-Know Your Locations

- ~1% of pregnancies will be ectopic
- Risk factors: prior BTL, Hx Gc/CT recurrent or inadequately treated, Hx PID, Hx endometriosis, prior ectopic, IUD in place
- Bleeding, pain, tender on exam-concern for ectopic
 - Obtain ABO RH and Antibody Screen
 - Obtain Beta HCG
 - Obtain US
 - Discriminatory zone is 1,000-1,500 for TVUS and 6,500 for TAUS

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Management of Extrauterine Pregnancy

- Based on clinical presentation and diagnostic findings
 - If ruptured, surgery is only option
 - Remove ectopic v remove tube?
 - If large, surgery is strongly recommended
 - Small (less than 3.5 cm) and stable ectopics can receive methotrexate injection
 - Patients MUST be COMPLIANT and motivated to have f/u testing
 - Need to have HCG of less than 5000 for best success
 - Repeat levels at o, 4, 7 days and need 15% decline every time

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Hyperemesis

- Patients losing 5% of pre-pregnancy body weight/symptoms negatively impacting ADLs
- Test thyroid function, obtain US, obtain BHCG (normal pregnancy?)
- Obtain CMP, CBC and liver US if LFTs abnormal
- Conservative: fluids before eating, no empty stomachs, cold fluids

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Hyperemesis Medication

- Vitamin B6 10-25 mg q6-8 hours, Diclegis (doxylamine-B6) BID
- Adding H1 antagonist (diphenhydramine), up to Promethazine
- Adding serotonin antagonist (stop H1 once this is added)
 - Ondansetron not preferred in less than 10 weeks pregnancy due to possibly cardio effects on fetus
- Addition of a antacid, H2 blocker or PPI may be beneficial
- Must correct any electrolyte disturbance and manage hydration status

Transient Hyperthyroidism of Hyperemesis

- Small percent of pregnant patients in early pregnancy will develop this
 - Due to high HCG stimulating TSH receptors
 - Usually resolves by 18 weeks
- Distinguished from overt Graves' by absence of goiter and ophthalmopathy, presence of vomiting, lack of heat intolerance, lack of tremor

Hypertension-Chronic

- Defined as existing before 20 weeks or lasting 12 weeks or more after delivery
- 140/90 or severe, 160/110
- In 2nd trimester, both SBP and DBP drop 5-10 mmHG lower
- Obtain baseline labs-CMP, urine protein evaluation, CBC, ECHO, or EKG if HTN for more than 4 years
- Start low dose ASA of 81 mg daily
- Increase frequency of visits and BP monitoring

Chronic Hypertension Meds

- Goal BP is 120-139/80-89 Diabetic patients goal 110-135/85
- Preferred medications:
 - Oral labetalol*
 - Nifedipine
 - Methyldopa
 - Oral hydralazine if needed to achieve and maintain goal*
- May NOT use ACE-I or ARBS
- May consider trial of no meds in first trimester if no end-organ damage and below goals

Development of Hypertension

- Management is same
 - Obtain labs
 - Obtain fetal ultrasound for growth if not already done
- Medication initiation with same goals
 - ACOG recommends 140/90 as initiation for medication
 - No data shows increase in rates of negative fetal outcomes with 140/90 start point

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Diabetes in Pregnancy

- Target range for glucose values in pregnancy 70-110
 - Fasting 70-95
 - 2 hour values 100-125
 - CGM 63-140 and time in goal range at >70%
- 1st trimester largest risk for maternal hypoglycemia for Type 1 DM
- Insulin is still preferred therapy
- Oral agents are able to be considered for patients who develop diabetes in pregnancy

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Diabetes in Pregnancy

- Obtain A1C at initial visit
- Baseline hypertension labs
- Dilated eye exam
- Start 81 mg ASA after 12 weeks gestation
- Urine Culture q trimester
- 400 mcg Folic Acid daily

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Take Home Points

- Maternal Deserts are increasing across the South
- Primary Care is equipped to handle the first trimester of care
- Access to care allows for better outcomes for maternal and fetal well-being
- You don't have to run the show, you just have to be on the stage when the curtain goes up!

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Questions?

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