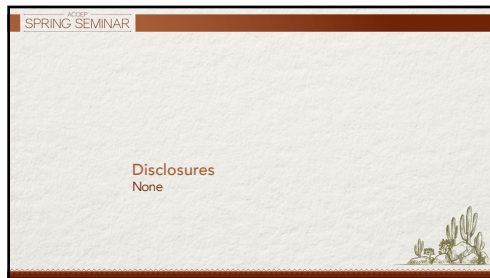




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2



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- Discuss some of the challenges we may face managing the pregnant patient in the community Emergency Department.
- Review tips for managing the pregnant in the emergency department.
- Discuss ways to optimize your support network in managing the pregnant patient in the community Emergency Department.



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So I might be pregnant....




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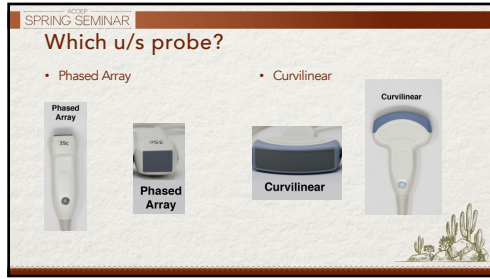
2023
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POCUS

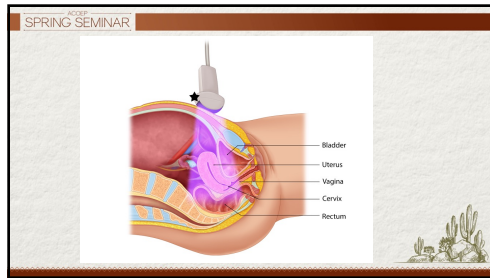
- PoCUS was found to be 99.3% sensitive in ruling out ectopic pregnancy by detecting an Intrauterine pregnancy (IUP)
- Specificity of 92-100% for confirming intrauterine pregnancy (IUP) when gestational sac and yolk sac or fetal pole seen.



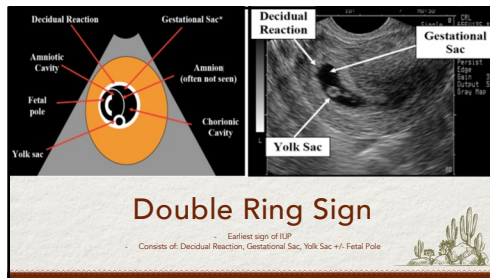
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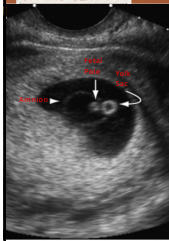


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SPRING SEMINAR



Double Ring Sign

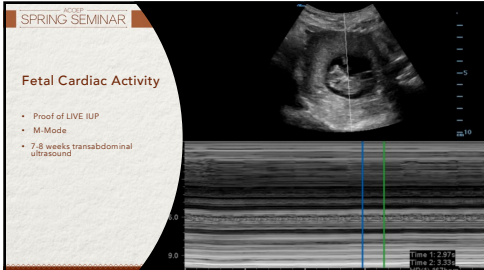
- Decidual Reaction: 14 days POST-fertilization
- Gestational Sac: 4-5 weeks TVUS and 6 weeks TAUS POST-fertilization
- Yolk Sac +/- Fetal Pole
- Yolk Sac: 5-6 wks TVUS or 6-7 wks TAUS
- Fetal Pole: 6 wks TVUS, 7 wks TAUS

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Fetal Cardiac Activity

- Proof of LIVE IUP
- M-Mode
- 7-8 weeks transabdominal ultrasound

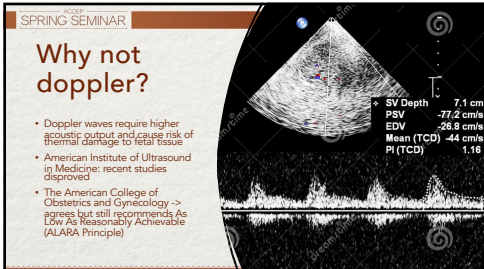


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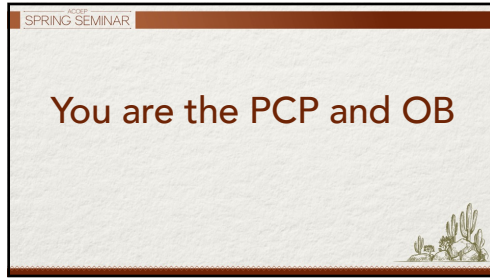
Why not doppler?

- Doppler waves require higher acoustic output and cause risk of thermal damage to fetal tissue
- American Institute of Ultrasound in Medicine: recent studies disproved
- The American College of Obstetrics and Gynecology -> agrees but still recommends As Low As Reasonably Achievable (ALARA Principle)

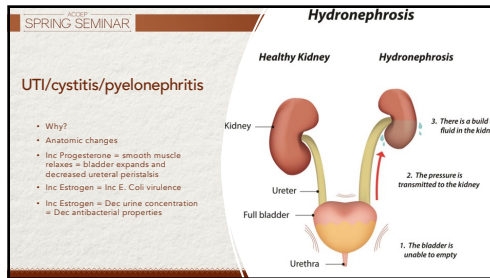


SV Depth	7.1 cm
PSV	-77.2 cm/s
EDV	-26.8 cm/s
Mean (TCD)	-44 cm/s
PI (TCD)	1.16

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14



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Treatment

- Asymptomatic bacteriuria and cystitis:
 - Cephalexin 250mg to 500mg four times a day for 3-7 days
 - Nitrofurantoin 100mg four times a day
- Pyelonephritis:
 - ADMIT, IV ABX - Rocephin - IV FLUIDS!!!
- Suppressive therapy:
 - Nitrofurantoin 100mg x 1 each night




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SPRING SEMINAR

Asthma

- Why?
 - Inc Estrogen = hyperemia, hypersecretion and mucosal edema of respiratory tract
 - Gravid Uterus = elevated diaphragm
 - Asthma exacerbations peak around 4th month gestation, worse 24th-36th weeks

Changes in asthma severity during pregnancy

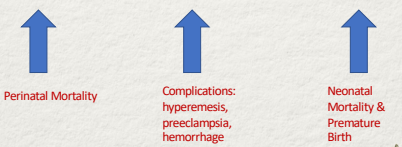


Change in Severity	Frequency
Asthma symptoms will get worse	1/3 of the time
Asthma symptoms will stay the same	1/3 of the time
Asthma symptoms will improve	1/3 of the time

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Why We Care




- Perinatal Mortality
- Complications: hyperemesis, preeclampsia, hemorrhage
- Neonatal Mortality & Premature Birth

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Treatment

- Short-acting inhaled bronchodilators - Albuterol
- Anti-leukotriene agents - montelukast
- Inhaled corticosteroids - budesonide
- Asthma is very severe - oral steroids - prednisone



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Hypertension

Chronic Hypertension

- (BP > 140/90) before pregnancy or diagnosed BEFORE the 20th week of gestation. Or hypertension diagnosed for the first time during pregnancy and persists beyond the 42nd day postpartum

Gestational/Transient Hypertension

- The development of elevated blood pressure during pregnancy or in the first 24 hours postpartum without other signs of preeclampsia or preexisting hypertension.

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CHAP Trial Treatment for Mild Chronic Hypertension During Pregnancy

2,408
Active Management
Group

**Standard Management
Group**

Primary Outcome:
Composite of preeclampsia with severe features, medically indicated preterm birth < 35 weeks, placental abruption, and/or fetal or neonatal death
38% risk reduction of a primary outcome event in the active management group (95% CI 21.5% to 54.5%)

Number needed to treat to prevent a single primary outcome event: 14.2

Safety Outcome:
Small for gestation (at 50% birth weight): 4.0%
No significant difference in rates of SGA (95% CI 2.0-6.0), stillbirth (95% CI 0.2-1.3)

Conclusions: Treatment to blood pressure < 140/90 mmHg for patients with chronic hypertension in pregnancy is associated with lower risk of death and death with less morbidity. Potential benefit increased for African-ancestry patients.

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ACOG
SPRING SEMINAR


Why We Care

Fetal Complications

- Intrauterine growth retardation, fetal death in utero, premature deliver

Maternal Complications

- Stroke, heart disease, renal failure.
- 15-20% of chronic hypertensives develop superimposed preeclampsia.
- Three fold risk for placental abruption and maternal hemorrhage.



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ACOG
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Treatment

- Labetalol 100 or 200mg BID
- Nifedipine 30mg XL daily

Should we treat mild chronic hypertension during pregnancy?

Group	Prevalence of CHH at delivery	Prevalence of preeclampsia
Control Group (n=1208)	37%	10.4%
Active Rx Group (n=1208)	30.2%	11.2%

ACOG Committee on Practice Management. Hypertension in Pregnancy. Committee Opinion No. 700. Obstetrics and Gynecology. 2022.



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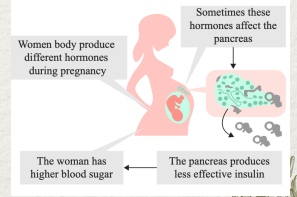
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Diabetes

Causes of gestational diabetes mellitus

Why?

- Secretion human placental lactogen & placental growth hormones = Inc insulin resistance.
- Inc estrogen, progesterone, prolactin = Dec peripheral sensitivity to insulin.

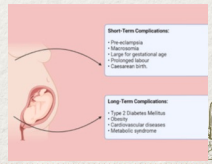


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Why We Care

- **Fetal Effects**
 - Macrosomia
 - Increased need for c-section.
 - 30-50% of neonates born to diabetic mothers develop neonatal hypoglycemia (glucose < 40).
 - Congenital malformations occur 2-4 times more frequently.
 - ASSOCIATION between first trimester spontaneous absorption and diabetic pregnancy.
- **Maternal Effects**
 - Preterm labor in 30% of diabetic pregnancies.
 - Preeclampsia and eclampsia more common.
 - Higher risk for DKA



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Treatment

- Medical nutrition therapy, exercise, weight loss.
- Insulin.
- Patients who were already T1DM or T2DM BEFORE pregnancy may need to double regular insulin usage while pregnant.
- ADMIT: Any pregnant patient who cannot clear ketosis with IVF in ED!!!



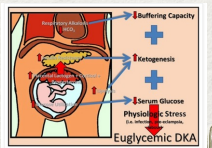
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Special Case of DKA in Pregnancy

- A few PEARLS

- Fetal mortality 50-90% in DKA.
- Hyperemesis gravidarum can trigger DKA → Patients WITHOUT diabetes often become ketotic early in pregnancy.
- T1DM: Euglycemic DKA
- Normal pregnancy serum pH mildly alkalotic → pregnant DKA patient may have a pH near 7.40 but STILL be in DKA.




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Case

- Early 20s Female presents for abdominal pain
- Her boyfriend threw her against the wall and punched her in the face multiple times PTA.
- She is 36 weeks pregnant



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Domestic Violence

More than 300,000 pregnant women in the U.S. experience intimate partner violence every year.

25% of women are abused for the first time during pregnancy.

77% of pregnant homicide victims are killed in early (first trimester) in their pregnancy.



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It's up to us

18% of pregnant women seen in the UC have been asked by their physician about intimate partner violence.

Less than half of health care providers routinely screen for domestic violence or sexual assault...

47% of intimate partner homicide and attempted homicide victims were seen by health care professionals in the year before their DEATH or ATTACK



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Resources

National Domestic Violence Hotline
at (800) 799-7233 or TTY for the
hearing-impaired at (800) 787-3224.

National Domestic Hotline Website:
<https://www.thehotline.org/>

The Safety Zone:
<http://thesafetyzone.org/>



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THANK YOU!



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