ADVANCING GI PATIENT CARE 2022

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Pregnancy and Liver Disease

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Disclosures

Anil Seetharam, MD

- Speakers Bureau/Consultant: Gilead

Outline

- Workup during pregnancy
- Diseases unique to pregnancy
- Coincident conditions
- Chronic liver disease

Liver Disease and Pregnancy

- Incidence of abnormal tests in pregnancy: 3-5%
- Majority of biochemistries remain normal
  - Placental: (Alkaline Phosphatase increases)
  - Dilutional: (Albumin and Hemoglobin decrease)
- Approach mirrors that in non-pregnant to start:
  - Pre-existing/coincidental condition vs.
  - Condition unique to pregnancy

Tran T et al. *Am J Gastroenterol*. 2016; 111:176–194.

Diagnostic Evaluation

- Serologic evaluation: common viral, IgM HEV, HSV PCR, autoimmune, inherited metabolic
- Ultrasound
  - Safe and preferred imaging modality
- MRI
  - Imaging without gadolinium in 2nd or 3rd trimester
- CT scan
  - Judicious use with minimal radiation protocols

Torloni MR et al. *Ultrasound Obstet Gynecol*. 2009. 33: 599–608.

Endoscopy During Pregnancy

- Safe, ideally defer until 2nd trimester
- Hemodynamic stability and adequate oxygenation
- Sedation: propofol safe, avoid benzodiazepines
- ERCP:
  - Limit fluoroscopy time
  - Advocate for cholecystectomy

Cappell MS et al. *Nat Rev Gastroenterol Hepatol*. 2011;8: 610–34; Robbins R et al. *Gastrointest Endosc*. 2019 Jun;89(6):1178-1179.

Conditions Unique to Pregnancy

- Wide spectrum of liver injury
  - Gestational age is important part of history
  - Many resolve with delivery of baby
- Hyperemesis Gravidarum (HG)
  - Early 1st trimester, usually resolves by 20 weeks
  - Persistent vomiting, loss of 5% of weight, ketosis
  - Mild AST and ALT elevations in 60%
  - Management largely supportive

Austin K et al. *Nutr Clin Pract*. 2019 Apr;34(2):226-241.

Conditions Unique to Pregnancy

- Intrahepatic Cholestasis of Pregnancy (IHCP)
  - Prevalence around 5%; 2nd or 3rd trimester
  - Pruritis and elevated bile acids, jaundice possible
  - Risk factors: advanced age, family history, cholestasis w previous OCPs
  - UDCA 10-15mg/kg first line, delivery at 37 weeks
- HELLP
  - 3rd trimester, rare, complication of pre-eclampsia/eclampsia
  - **H**emolytic anemia, **E**levated **L**iver enzymes, **L**ow **P**latelets
  - Risk factors: advanced age, nulliparous, multiparous
  - Complications: hepatic infarction, subcapsular hematoma, hemorrhage
  - Prompt delivery of the fetus, corticosteroids for baby lung development

Palmer K et al. *Lancet*. 2019 Mar 2;393(10174):853-854; Wallace K et al. *Curr Pharm Biotechnol*. 2018;19(10):816-826.

Conditions Unique to Pregnancy

- Acute Fatty Liver of Pregnancy (AFLP)
  - Rare, life-threatening, ~36 weeks gestation
  - Microvesicular fatty infiltration leads to liver failure
  - Risk factors: twin pregnancies, low BMI
  - Swansea Criteria combine signs and lab derangements for diagnosis
  - LCHAD deficiency: homozygous offspring spill unmetabolized fatty acids into maternal circulation
  - Prompt delivery, close monitoring of the mother and baby

Liu J et al. *Am J Gastroenterol*. 2017 Jun;112(6):838-846.

Summary

Condition	Trimester	Key Feature	Management
HG	1st	Intractable n/v	Supportive, hydration, electrolytes
IHCP	2/3rd	Pruritis and elevated bile acids	UDCA 10-15mg/kg Delivery at 37 weeks
**Preeclampsia/ Eclampsia	2nd/3rd	AST/ALT variable	Delivery after 36 weeks in severe cases
HELLP	2nd/3rd	Low platelets	Prompt Delivery, plt transfusion to 50k if c-section planned
AFLP	3rd	High AST/ALT/Tbil	Prompt Delivery, close fetal monitoring for hypoglycemia

**New onset hypertension and proteinuria at 20 weeks; eclampsia: seizures

Coincident to Pregnancy

- Hepatitis A
  - Pregnancy does not alter course of infection
  - Mother to infant can occur: HAV immunoglobulin within 2 weeks of deliver
- Hepatitis E
  - Increased risk of ALF
  - Treatment supportive, anticipatory value
- Herpes Hepatitis
  - HSV seroprevalence is common
  - Hepatitis rare, mucocutaneous lesions not always present
  - Severe hepatitis presentation, anicteric
  - PCR testing when suspected
  - Associated with poor outcomes; empiric acyclovir is recommended

Aslan A et al. *World J Gastroenterol*. 2020 Oct 7;26(37):5543-5560; McCormack A et al. *Obstet Gynecol Surv*. 2019 Feb;74(2):93-98.

Chronic Liver Disease and Pregnancy

- Hepatitis B
  - Mother to child transmission (MTCT) leads to chronicity
  - Hepatitis B immunoglobulin and HBV vaccination offered to all infants born to infected mothers
  - Assess viral load beginning of 3rd trimester
    - >200,000IU/mL or 10^6 copies require antiviral therapy
  - C-section should not be performed electively
  - Allow breastfeeding

Terrault N et al. *Nat Rev Gastroenterol Hepatol*. 2021 Feb;18(2):117-130.

Chronic Liver Disease and Pregnancy

- Autoimmune Liver Disease
  - AIH: continue treatment with corticosteroids and azathioprine
  - PBC: continue ursodiol
- Wilson Disease
  - Inadequate data to put forth “preferred” chelator
  - Continue therapy, dose reduction as possible

Ma K et al. *Clin Liver Dis*. 2019 May;23(2):345-361.

Chronic Liver Disease and Pregnancy

- Cirrhosis
  - Screen for esophageal varices in the 2nd trimester
    - Consider EVL vs. short acting non-selective beta blockade
  - No data for vaginal delivery vs. c-section
- Liver Transplant Recipients
  - Fertility restored at 1 year in 80% of recipients
  - Most immunosuppressants okay, d/c mycophenolate mofetil
  - Minimal excretion of immunosuppressants into breast milk

Milić S et al. *Best Pract Res Clin Gastroenterol*. 2020 Feb-Apr;44-45:101668.

Summary

- Ultrasound is the first-line diagnostic imaging
- Endoscopy is safe but requires planning
- Conditions unique to pregnancy can be treated effectively, prompt delivery in severe injuries
- Antiviral therapy effective in reducing MTCT of HBV
- With chronic conditions, continuing treatment to maintain stability is usually the right answer