- There are insufficient data to recommend use of elastography during pregnancy.
- Breastfeeding is safe after iodinated or gadolinium contrast.

Management of Chronic Liver Diseases During Pregnancy and Lactation

Pregnancies in women with liver disease should be comanaged by hepatologists, MFM specialists, and pediatricians as needed.

HEPATITIS B

Pregnancy provides an important opportunity to identify hepatitis B virus (HBV)-infected women and implement measures to prevent mother-to-child transmission (MTCT). All women should be tested for hepatitis B surface antigen (HBsAg) with prenatal labs,[115] with HBV-DNA testing performed if positive.[116] For women negative for HBV markers, vaccination should be considered and is safe in pregnancy.[117]

Regarding antiviral safety, lamivudine, telbivudine, and tenofovir disoproxil fumarate (TDF) have been studied extensively, with no associated teratogenicity, even in the first trimester,[118] and no increased risk of congenital malformations, prematurity, or low Apgar scores (Table 4).[119] Lamivudine and telbivudine have higher rates of resistance than TDF; thus, TDF is preferred in pregnancy. There are insufficient data on the other preferred HBV antivirals, entecavir and tenofovir alafenamide (TAF), to recommend their use in pregnancy.[116] For women with active chronic hepatitis B who wish to complete a finite course of treatment before conceiving, peginterferon for 12 months may be considered.[116]

Women on antiviral therapy who become pregnant must decide whether to continue antiviral therapy or stop and, if continued, whether to change antivirals if not currently on TDF. Although there are no identified teratogenic effects of non-TDF antivirals, most experts recommend switching to TDF if treatment is continued during pregnancy. Stopping treatment depends on the likelihood and consequences of relapse. Women with advanced fibrosis should not stop therapy, given concerns for decompensation with a clinically significant flare.

Chronic hepatitis B has little influence on the course of pregnancy. Alanine aminotransferase (ALT) flares, variably defined, have been reported during pregnancy and postpartum periods, with greater frequency following discontinuation of antivirals. Most ALT flares are asymptomatic, although underlying advanced fibrosis may lead to clinically severe flares.[120] Hepatic flares occur in 3.5% to 25% of women within the first 3 months after delivery or cessation of antiviral treatment; therefore, monitoring is recommended.[121,122]

Prevention of MTCT of HBV is important. Although infant vaccination and hepatitis B immunoglobulin (HBIG) are highly effective, prophylaxis failure occurs in up to 15% of pregnancies.[123-126] Timeliness of HBV vaccine and HBIG affects success, with vaccination within 12 hours of birth recommended.[127] HBV viral load at delivery is an additional risk factor for prophylaxis failure, and risk of MTCT is extremely rare if HBV DNA is below 200,000 IU/mL. Antiviral therapy in the third trimester is associated with a 70% reduction in MTCT compared with no antiviral therapy (7.5% vs. 27%).[119] The preferred drug is TDF, starting at 28 to 32 weeks' gestation, with reductions in MTCT from 18% to 5%.[123] Earlier initiation of antiviral treatment should be considered for HBV-DNA levels of 7-log IU/mL or greater, to ensure sufficient time to achieve HBV-DNA levels of less than 200,000 IU/mL at delivery.[126] Treatment can be stopped after delivery, with no clear benefit on ALT flares if the antiviral is stopped at delivery versus 1 to 3 months postpartum.[122,128]

Cesarean delivery has not been shown to reduce risk of MTCT[129] and should be used for obstetrical indications only. Theoretically, prolonged rupture of membranes or labor may expose infants to HBV, particularly in mothers with high-level viremia. However, appropriately administered infant immunoprophylaxis appears to negate this risk. Amniocentesis may increase MTCT risk, particularly in highly viremic women (i.e., ≥7 $\log_{10}$ IU/mL).[130-132] The potential risk should be disclosed to parents. In high-risk pregnancies in which invasive procedures are anticipated, earlier use of antiviral therapy may be considered, although data to support this practice are limited.[124]