**Q** How should you manage children born to hepatitis C-positive women?

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**EVIDENCE-BASED ANSWER**

**A** For starters, don’t be overly concerned with the mode of delivery; it doesn’t influence the rate of transmission of hepatitis C virus (HCV), except in women who are also infected with human immunodeficiency virus (HIV) (strength of recommendation [SOR]: B, consistent retrospective cohort studies).

Advise patients that it’s OK to breastfeed. Breastfeeding doesn’t affect transmission (SOR: B, consistent prospective cohort studies).

Avoid internal fetal monitoring and prolonged rupture of membranes (SOR: B, single retrospective cohort study).

Check HCV RNA and serum anti-HCV on 2 occasions between 2 and 6 months of age and 18 and 24 months of age (SOR: B, consistent prospective cohort studies).

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**Evidence summary**

Perinatal transmission of HCV is rare. It occurs only when serum HCV RNA is detectable; transmission rates may be related to higher levels (>10⁶ copies/mL).¹ HCV is transmitted to 2% of infants of anti-HCV seropositive women and 4% to 7% of infants born to mothers who are HCV RNA-positive at delivery.¹

Spontaneous clearance of the virus occurs in approximately 20% of infants. Most remain asymptomatic if HCV persists, but have mild elevation of liver function tests.²

Routine screening for HCV in mothers is not recommended, but pregnant women at high risk for HCV infection should be screened for anti-HCV.

**Route of delivery:**

**Only a concern for HIV-positive mothers**

The mode of delivery doesn’t influence the rate of HCV transmission, except in mothers with HIV. Retrospective analysis of 503 HCV-positive mothers coinfected with HIV showed a decreased risk of transmission during cesarean delivery (odds ratio [OR]=0.36; 95% confidence interval [CI], 7.7; 95% confidence interval [CI], 1.9-31.6; number needed to treat [NNT]=10).³

One study suggested an increased rate of vertical HCV transmission during vaginal delivery compared with cesarean delivery (32% vs 6%; P<.05). The study didn’t account for the percent of mothers coinfected with HIV, however.⁴

A meta-analysis of 11 studies showed similar rates of transmission for vaginal and cesarean delivery: adjusted rates were 4.3% and 3%, respectively.¹

**Internal monitoring is an issue**

Avoid internal fetal monitoring to minimize HCV transmission, based on a single retrospective cohort of 244 infants born to HCV-positive mothers (relative risk [RR]= 7.7; 95% CI, 1.2-81; NNH=13).⁵ The same study showed an increased risk with membrane rupture longer than 6 hours (RR=9.9; 95% CI, 1.2-81; NNH=13).⁵

Breastfeeding doesn’t significantly affect HCV transmission. Transmission rates for breastfed and nonbreastfed infants are 3.7% and 3.9%, respectively.¹

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Matthew Powell, MD; Justin Bailey, MD
David Grant Medical Center, United States Air Force, Travis Air Force Base, Calif
Lauren A. Maggio, MS(LIS), MA, AHIP
Lane Library, Stanford University, Palo Alto, Calif

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Defer postpartum lab testing
Because about 20% of infants exposed to HCV clear the virus spontaneously, and maternal antibodies can confound laboratory results, deferring postpartum diagnostic testing is appropriate. A study of 1104 children in whom vertical transmission didn’t occur after exposure to HCV showed that 95% of the children were anti-HCV antibody negative by 12 months age. A prospective study of 23 infants documented spontaneous clearance of HCV RNA by 6 months in all patients.

Recommendations
The National Institutes of Health 2002 Consensus Statement recommends:
• avoiding fetal scalp electrodes and prolonged rupture of membranes
• serum testing for HCV RNA at 2 months and 6 months of age
• anti-HCV antibody testing after 15 months of age.

The American College of Obstetricians and Gynecologists supports breastfeeding, recommends against routine HCV screening, and recommends that cesarean delivery be reserved for obstetric indications.

The American Association for the Study of Liver Diseases recommends serum testing and liver biopsy on the same schedule as adult patients and endorses considering treatment after 3 years of age.

The US Food and Drug Administration has approved treatment after 3 years of age for children with detectable HCV RNA levels higher than 50 IU/mL and who have had a liver biopsy with portal or bridging fibrosis and at least moderate inflammation and necrosis.

The American Gastroenterological Association recommends considering treatment with PEG-interferon and ribavirin after 3 years of age.

References