



## **INFECTION, SEPTIC SCREENING AND MANAGEMENT**

### **HEPATITIS C**

Hepatitis C virus (HCV) is an RNA virus. It is an important cause of chronic liver disease and is relatively prevalent in Australia and South East Asia. The virus replicates in the liver and is readily present in the bloodstream. The majority of acute infections become chronic. Chronic HCV infection is an important cause of hepatic dysfunction and hepatocellular carcinoma. Treatment of chronic infection is available, but cure rates vary depending on viral genotype and possibly host factors.

HCV is readily spread by exposure to infected blood; therefore injecting drug users are at highest risk for Hepatitis C infection. In addition, HCV can rarely be spread through sexual contact.

Vertical transmission from affected mother to infant occurs. The risk is 5-10% for mothers who are HCV RNA positive (ie: PCR positive), but significantly higher (25-30%) if the mother is co-infected with HIV. Of the ~250,000 births per year in Australia, about 75 children with vertically acquired HCV infection will be born per year. There is no currently available method of preventing or reducing vertical transmission.

#### **PEOPLE AT RISK OF HCV INCLUDE:**

- History of IV drug use (even if only on a few occasions many years ago)
- Transfused with blood products prior to effective screening (1990)
- Are or have been incarcerated
- From countries with high background HCV prevalence
- Have tattoos (body piercing carries lower risk)

#### **KEY POINTS**

- No special precautions are necessary for the care of the newborn in the nursery. Standard precautions are sufficient. There is no risk of virus transmission from urine or stool.
- Check mother has been tested for other blood borne viruses, in particular HIV and Hepatitis B.
- Breast-feeding is generally considered safe; mothers should be warned of the increased risk of transmission if they have cracked nipples or any inflammatory process including engorgement and mastitis should not breast feed until these are resolved. The infant should be fed with formula and the mother should express her milk and discard it.
- No infants have been found to be viraemic at birth, so testing of cord blood or from the neonate at birth is not necessary.

#### **BREAST FEEDING**

Breast-feeding does not appear to play a significant role in the mother-to-infant transmission of HCV. However, HCV RNA has been found in breast milk in women with very high circulating viral loads, but usually at a much lower level than in the blood. As mothers with very high viral loads are more likely to transmit the virus at birth, the significance of the HCV in the milk in these women is not certain. Current advice from Centre for Diseases Control is that breast-feeding is not contra-indicated in HCV positive women. Those women with cracked nipples or with any inflammatory process including engorgement and mastitis should not breast feed until these are resolved. Women co-infected with HIV should definitely not

breast-feed, as this significantly increases the risk of HIV transmission. [Hepatitis C and Breastfeeding \(Patient Information Sheet\)](#)

## TESTING OF NEONATES

- Parents should be counselled and offered testing of their infants to see if they have acquired HCV. Anti-HCV antibodies passively derived from the mother decline after birth, and are usually absent by 18 months. Therefore, uninfected infants should be antibody-negative by 18 months.
- Serum HCV RNA should be tested between 2-6 months for all children at risk of perinatal transmission exposure to HCV (sensitivity of testing at this time 70-85% with specificity 98%). ANZPID perinatal guidelines states to perform a HCV PCR at 3 months and if negative consider performing the Hep C serology at 18 months OR if follow up can be ensured to perform Hep C serology at 18 months. Testing antibodies prior to this time is limited due to passive transfer of maternal antibodies.
- Testing can be done by Infectious diseases at PMH, WANDAS clinic at 3 months or rural Paed/GP (also can be done ad hoc due to the high loss to follow up).
- Any positive test results should be referred on to infectious diseases at PMH.
- Diagnosis in the first years does not usually lead to any medical intervention. The infected infants should receive Hepatitis B vaccine, as they are more at risk of contracting hepatitis B and the infection may be more severe in a patient with established hepatitis C. Hepatitis A vaccine should be given to HCV infected children when they are 2 years of age.
- Infants who are Hepatitis C-positive should be followed up by the gastroenterologists at PMH.  
[Complete the 'Maternal Hepatitis C Infection and Neonatal Follow-up Letter](#)

## TREATMENT

Spontaneous clearance of HCV in vertically infected infants has been reported. There are therapies available for people with HCV infections and ongoing liver disease, including Interferon and Ribavirin. Response rates vary depending on the HCV genotype and treatments used. Treatment of children with liver disease and HCV is a difficult area and specialist advice should be sought.



## REFERENCES

1. Infection Control Manual WNHS 2014: [Prevention and Management of Infectious Diseases: Standard precautions](#)
2. Dore G, Law M, MacDonald M et al Epidemiology of hepatitis C virus infection in Australia J Clin Virology 2003;26;171-184
3. Garner JJ, Gaughwin M, Dodding J, et al Prevalence of hepatitis C infection in pregnant women in South Australia. Med J Aust. 1997 Nov 3;167(9):470-2.
4. Maayan-Metzger, A., Mazkareth, R., & Kuint, J. (2003). Fever in healthy asymptomatic newborns during the first few days of life. *Arch Dis Child*, 88, F312-4.
5. Red Book 2003 Report of the Committee on Infectious Diseases 26<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics;2003: 336-340. [Division of Viral Hepatitis Home Page | Division of Viral Hepatitis | CDC](#)
6. Seidel, HM, Rosentein, BJ, Pathak, A. (2001). Primary Care of the Newborn. St. Lois, Mosby.
7. Polywka S, Pembrey L, Tovo PA, Newell ML. Accuracy of HCV-RNA PCR tests for diagnosis or exclusion of vertically acquired HCV infection. **J Med Virol**. 2006 Feb;78(2):305-10

National Standards – 1- Care provided by the clinical workforce is guided by current best practice  
 3- Preventing and controlling healthcare associated infections

Legislation - Nil

Related Policies - Nil

Other related documents –Patient Information Sheet :[Hepatitis C and Breastfeeding](#)

[Neonatal Follow-up Letter](#)

[Neonatal Postnatal Clinical Guidelines: Maternal Hepatitis C](#)

## RESPONSIBILITY

<b>Policy Sponsor</b>	<b>Neonatology Clinical Care Unit</b>
<b>Initial Endorsement</b>	February 2010
<b>Last Reviewed</b>	November 2015
<b>Last Amended</b>	
<b>Review date</b>	November 2018

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