

MCN for Neonatology

West of Scotland

Neonatal Guideline



Hepatitis C

Management of infants born to mothers with Hepatitis C

This guideline is applicable to all neonatal departments in the West of Scotland. Staff should also refer to separate guidance about Hepatitis B and HIV if dealing with a mother who is co-infected with these viruses

Introduction

Hepatitis C (HCV) has a prevalence of approximately 0.8% in the Scottish population, rising to 50% in intravenous drug users. As a blood borne virus it can be transmitted to the fetus, potentially leading to infection of the newborn infant. Perinatal transmission only occurs in pregnancies where the mother has detectable HCV RNA in the blood (by PCR) or positive HCV Antigen. The risk of transmission in such pregnancies is around 5% and this risk is not affected by the mode of delivery or the use of fetal scalp electrodes. The risk of transmission is doubled if there is concomitant HIV infection.

Screening of at risk women during pregnancy

There is currently no routine screening for hepatitis C in pregnancy. With the advent of more efficacious medicines with lesser side effects, there is a need to improve case ascertainment in high risk patients.

Identification of pregnant women considered to be at risk of Hepatitis C, and arrangements to offer screening to these women is dealt with in separate obstetric guidelines. However the following list is based upon guidance from [SIGN guideline 133 - Management of hepatitis C \(2013\)](#) and local practice.

1. Known to be HIV +ve
2. History of current /past IV drug use
3. Partner with a history of current/past IV drug use
4. History of haemodialysis
5. History of blood transfusion prior to 1992
6. History of overseas invasive procedures (dental, surgical, immunisation)
7. Pregnant ladies in prison
8. Coming from area of high prevalence – Egypt, Southeast Asia, Africa, Southern and Eastern Europe.
9. Prison inmates

Hepatitis C PCR Positive mothers should be flagged to the neonatal team

Maternal HCV antibody and HCV PCR status should be recorded on the alert sheet in maternal notes. Any co-infection should also be recorded.

Which Babies should be tested?

Mothers are **only** at risk of transmitting infection if they are RNA PCR or Antigen positive.

Those that are Antibody positive but RNA PCR negative are not considered at risk of transmission and testing is not required.

Testing the infant for HCV

The infant should be tested for HCV antibody status at 12-18 months of age. This requires 1-2ml of blood in an EDTA bottle. *(There is **no need** to test at birth (nor any benefit)).*

If infants are negative for HCV antibody **they** may be discharged from clinic.

NB – the referral for testing should be made shortly after birth to ensure this is not forgotten.

Local arrangements for testing the infant

PRM / RHC – Infants born in the PRM or RHC should be referred to the Infectious diseases team at RHC for testing. A proforma is available for this – see appendix. *An exception may be infants who are co-infected with HIV who are being followed up in clinic in the PRM for whom testing for both HCV and HIV may be performed at the same time.*

[Referral Proforma Princess Royal Maternity](#)

[Referral Proforma Royal Hospital for Children](#)

RAH - Infants born in RAH will be tested in the local paediatric clinic.

Infants testing positive for Hepatitis C

All infants found to be positive for Hepatitis C antibody should be referred to the infectious diseases team at the Royal Hospital for Children (Drs Hague and Doherty) for further testing and follow up.

Immunisation

Those infants that are found to be positive will need to be protected against hepatitis A. Infants will already have been immunised against hepatitis B – see WoS Immunisation Guideline

Can the infant breast feed?

Hepatitis C does not transmit via breast milk and breast feeding should be encouraged. (Unless there is concomitant maternal HIV infection)

Parental information

A Parent information leaflet is available and should be given to parents.

Natural history

Infants born to women who are HCV antibody positive will test positive for HCV antibody at birth. Infants who are not infected become negative for HCV antibody between six and 20 months of age. Around 80% will be negative by 12 months of age.

Positive results for viral RNA may be obtained in the early months of life in children who subsequently become negative and lose HCV antibody. Some infected infants may not become HCV RNA positive until 12 months of age or thereafter. A recent study indicates that the sensitivity of a positive PCR result obtained on two occasions between two and six months of life in predicting infection is 81% (CI 58-97%). In HIV co-infection, infants consistently positive by RNA may have negative HCV antibody tests between 12 and 18 months of age.

Progression to severe hepatitis or cirrhosis on childhood is rare (<5%). There is a slow non-linear progression of fibrosis with age. The mean time to development of cirrhosis in individuals infected as infants is estimated to be more than 20 years.

Potential treatment

Children that are demonstrated to have acquired infection will be followed up by the infectious diseases team at the Royal Hospital for Children in Glasgow (RHC) and would be assessed for any signs of the development of liver disease.

Children infected with HCV would be assessed regularly by clinical examination, blood tests and liver scans. If any concerns the infectious diseases team will do further tests and decide about starting antiviral treatment.

The response rates to antiviral treatment in children are of a similar magnitude, and show the same influences of Hepatitis C genotype, to adults. Combination treatment with interferon (IFN) and ribavirin renders Hepatitis C nucleic acid negative in 50-60% of cases (may be higher in certain genotypes). There is a potential for effects on thyroid function and growth problems. Treatment of Hepatitis C virus is an evolving field. New and more effective antiviral medicines are now being used in the management.

Immunisation of infected infants

Those infants that are found to be positive will need to be protected against hepatitis A&B. Many infants will already have been immunised against hepatitis B if at risk for Hepatitis B. Vaccination of non-immune children will be organised by the infectious diseases team.

Principles of testing:

Detection of viral RNA by PCR indicates current infection. Detection of antibodies indicates resolved or current infection.

Diagnostic testing for HCV should be performed on EDTA blood sample.

HCV genotyping should be undertaken if antiviral therapy is being considered.

References

[Sign guideline - Hepatitis C 2013](#)

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Other professionals consulted

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