Worcestershire Acute Hospitals NHS Trust

Care for the Hepatitis C positive Women

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Key Amendments

Date	Amendments	Approved by

Introduction

Hepatitis C (HCV) is an important cause of chronic liver disease, accounting for an estimated 40% of cases in developed countries. Despite the introduction of an effective screening policy for all blood donations, transmission continues to occur by other means.

Although there is currently little data on HCV infection in pregnancy, the available data does not suggest an increase risk of congenital malformations, fetal distress, stillbirth or prematurity. Women with HCV and their fetuses are no greater risk of obstetric or perinatal complications compared with other women. There is no contraindication to pregnancy on the grounds of HCV alone.

Unfortunately there is no known method for preventing vertical HCV transmission. The benefits of early detection of infected children are unknown.

The aim of care is to offer appropriate interventions to reduce mother to child transmission of Hepatitis C and avoid deterioration of mother's health. Very little is reported on the effects of pregnancy on the course of HCV infection. The majority of women appear to be unaffected.

Confidentiality

Health professionals owe a duty of care to all their clients and therefore results of all blood borne viruses should be revealed only on a need to know basis. Information regarding a result should not be documented in hand held notes unless consent has been obtained from the women. Overuse of biohazard stickers should be avoided.

Positive Hepatitis C result should be documented on the alert sheet in the main hospital notes and on the maternity information system (Bluespier) as early as possible, and note whether any of the women's family are aware of the diagnosis.

It is important that sufficient information is recorded in the hand held notes to ensure appropriate care if women are admitted unexpectedly or in emergency when hospital case record may not be available initially.

Information about how the client wishes to be contacted should be recorded, should this become necessary i.e. phone call to mobile or home landline or by letter.

Antenatal care

Pregnant women are not offered routine screening for hepatitis C virus.

Screening for hepatitis C virus is offered to high risk women because antiviral therapy can be considered in the postpartum period which may decrease their risk of end stage liver disease and hepatocellular carcinoma. The following women should be considered high risk and offered screening by the community midwife/staff performing antenatal booking:

- Past or present intra-venous drug users (IVDUs)
- Partners of IVDU and or HCV/ HIV positive.
- Patients with unexplained elevated aminotransferase levels
- Recipients of blood products before 1990 and immigrants from developing countries.
- Patients who have undergone organ or tissue transplantation from unscreeneddonors

This should be offered alongside the routine booking bloods even in late bookers. For unbooked women HIV status should be checked as urgency/priority on first admission to hospital as risk of vertical transmission is increased to 25% with concomitant HCV and HIV infection. If Hep C Positive status is already known then the Hep C bloods should be offered alongside the booking bloods.

HCV positive result and informing the women and relevant staff & Laboratory investigations

All HCV positive results are conveyed to the source where they were requested from and the Laboratory will contact the screening midwives directly, who will manage the results and make appropriate referrals including a paediatric alert. Following the positive HCV results blood should be taken for:

HCV RNA quantitative and qualitative genotype test should be performed. Ensure that blood placed in two EDTA tubes for quantitative and qualitative RNA testing for HCV is sent when HCV antibody status known, as approx 50% of HCV Antibody will be RNA negative having spontaneously cleared. These can be reassured they do not have HCV but have had past exposure.
The following specific tests should also be requested in a patient with HCV in early pregnancy:

- LFTs, (ALT and AST): Fewer than 10% display elevated transaminases, and in most cases a decrease in ALT during pregnancy has been noted with a rebound postpartum.
- Screening HBV serology and Anti-HBs Antibody levels
- Anti-HA IgG
- Albumin
- Bilirubin
- INR

Referral to specialist service

Early referral for obstetric consultant booking:

- To inform the women of a positive result and discuss the risk of mother to child transmission
- To make a plan of care for the pregnancy
- To inform the women and gain consent for referral to the infectious diseases physician for further care

Referral should be made to Infectious diseases physician early in pregnancy for comprehensive prenatal care plan. Early assessment of both general physical health and liver function will identify those patients most likely to benefit from a multidisciplinary team approach.

Antenatal Paediatric referral should be completed.

Drug/alcohol misuse and HIV

- If a woman is IVDUs /alcohol misuse or HIV positive as well, drug and alcohol/HIV MDT should also be involved in her care.

- Women should (not clear) be emphasized the negative effect of alcohol on course of disease. Consumption above 2 units per day accelerates the progression of HCV infection and abstinence represents the best option for all women

Fetal Anomaly screening

The women should receive the same pre-test discussion as anyone else. A mid-trimester anomaly ultrasound scan should be offered.

No association between HCV and fetal dysmorphism has been made.

Prenatal diagnosis by chorionic villus sampling or amniocentesis

There is no data regarding procedures such as amniocentesis or CVS and the risk of vertical transmission. Women with undetectable HCV RNA by quantitative PCR may not carry an increased risk of vertical transmission following these procedures. In the presence of HCV RNA, the indication and risk of abnormality must be balanced against the potential increase in transmission risk and woman should be appropriately counselled.

Frequency of antenatal checks

These should be dictated by the women's needs and the clinical picture according to medical and obstetric condition of the patient. There is usually no clinical reason for her to be seen exclusively in a consultant antenatal clinic. Community midwife care is often perfectly appropriate.

Monitoring the pregnancy

LFTs including transaminases should be measured in each trimester. Baseline values will be useful to distinguish between HCV related liver dysfunction and that from pregnancy induced complications such as gestational hypertension/HELLP syndrome or cholestasis of pregnancy.
There is no report of an increase incidence of preterm labour, IUGR or fetal distress in the pregnancies of women with HCV in the absence of other contributory factors, no specific recommendations can be made for fetal assessment during pregnancy.
However if the patient had history of present IVDUs /smoking, serial growth scan should be offered at 28, 32, 36 weeks.It may be wise to avoid the use of drugs which are potentially hepatotoxic or require extensive metabolism in the liver

Preterm prelabour rupture of membranes

(Prolonged) rupture of membranes should be avoided. If there is premature rupture of membranes an assessment should be made of the risk of premature delivery against the risk of transmission of HCV. This discussion should take place between physician, obstetrician, paediatrician and the parents.

Induction of Labour

HCV infection is not an indication for induction of Labour

IOL should be for obstetric indications.

Similarly, augmentation should be performed according to protocol.

Discussion regarding mode of delivery

Currently there is no evidence from randomised controlled trials upon which to base any practice recommendations regarding planned caesarean section versus vaginal delivery for preventing mother to infant hepatitis C transmission. Pending randomised trials mode of delivery should not be determined by maternal HCV status. Women with HCV should be allowed to deliver vaginally unless obstetric reasons dictate otherwise.

Intrapartum & Postpartum Management

Intrapartum Management

There is some evidence of transmission of infection with the procedures that promote mixing of fetal and maternal blood, such as the use of scalp electrodes and fetal blood sampling. These procedures should be avoided.

External cardiotocography should be used where continuous fetal monitoring is clinically indicated, fetal scalp electrodes should not be used

Although there is no data regarding the duration of membrane rupture and vertical transmission rates, it would seem sensible to maintain membrane integrity as long as possible to avoid fetal exposure to potentially infected cervico-vaginal secretions. Similarly episiotomy should require careful consideration

A previous delivery of a child infected perinatally with HCV does not increase the risk of transmission in subsequent pregnancies.

Immunogenetic factors and HCV genotypes are not related to HCV perinatal transmission.

As in all Labours universal precautions should be observed. There is no need to isolate either mother or infant

Postpartum Management

Basic hygiene and the disposal of potentially infected material should be discussed with patient

Breastfeeding

Women with HCV infection should be advised that unless there are other contraindications, they should consider breast feeding their infants. The benefits of breast feeding outweigh the theoretical, but unproven risk of HCV transmission to infant. However, women who experience a flare of chronic HCV infection with jaundice postpartum or develop cracked, bleeding nipples should stop breastfeeding.

Effective future contraception should be discussed as part of obstetric care

Care of the Newborn

Infants may be cared for according to usual hospital protocol while universal precautions are practiced. There is no need for the mother to alter normal child care routines and the use of gloves, masks or extra sterilization is unnecessary. HCV is a blood borne pathogen and is not transmitted by saliva, urine or stool. Similarly no special precautions are necessary for the care of newborn in nursery

Infant testing

We should not do cord bloods or bloods for hepatitis screening in the neonatal period (high false positive rate).

HCV RNA is performed around 3 months of age and then repeated at 1yr with antibody levels. Testing is done in children's clinic. Approximately 25% of infected infants will clear the virus spontaneously. The other 75% generally have only mild hepatitis throughout childhood, but they require follow-up because a small percentage will develop progressive liver disease and are at risk for hepatocellular carcinoma.

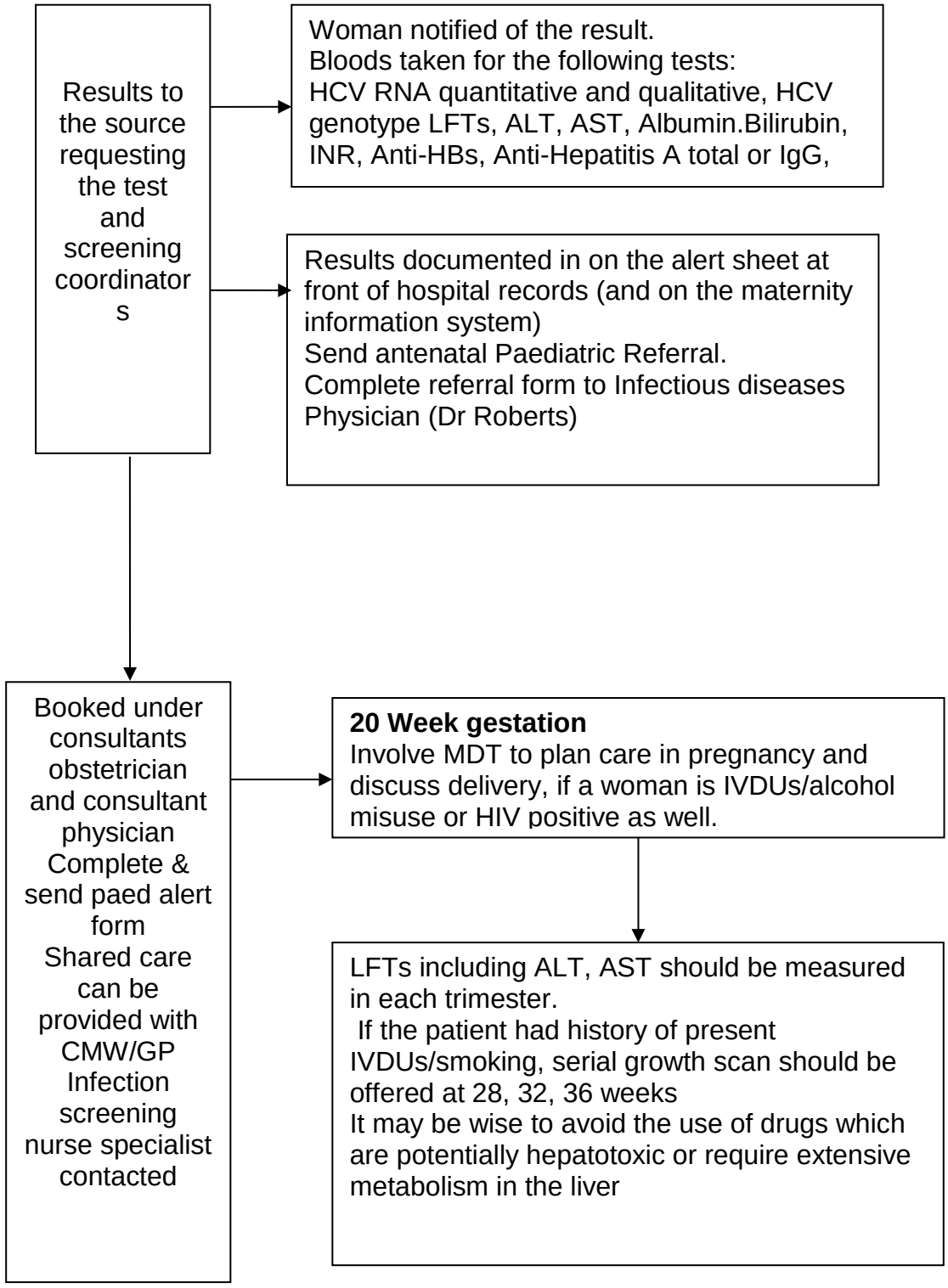
Infant immunisation

Hep B vaccination is recommended for hep C carriers (ie if bloods +ve at 1yr of age).
Hep B vaccination is recommended for children of injecting drug users (either parent) but not other drug users and not recommended for infants of Hep C carrier mothers in the absence of other risk factors.

If the baby is likely to require observation in Transitional care unit (TCU)

e.g. babies of women with history of IVDU, this should be discussed with the microbiologist/ infection control team antenatally to pre-plan the arrangements for the mother and the baby. This should be done by before 36 weeks of gestation. The plan should be clearly documented in woman's hospital and hand held health records.
In TCU all mothers share toilet facilities. After individual risk assessment by the infection control team, woman who is a high infective risk may be advised to use isolated toilet facilities. She may either be admitted to TCU but asked to use the toilets remote from the TCU or baby may be admitted to NNU and mother on the postnatal ward. To avoid anxiety and distress proper antenatal counselling is necessary.

Algorithms
I - Antenatal Care Pathway for Hepatitis C positive women



For care of women admitted to Delivery suite, known to be Hepatitis C positive

- Notify on-call obstetrician and Paediatrician of admission in Labour
- Universal precautions
- Delay A.R.M as long as possible
- Avoid FSE/FBS
- External cardiotocography should be used where continuous fetal monitoring is clinically indicated.
- For all needle stick injuries-PEP pack available in A&E department

C-Pathway for management of infants born to Hepatitis positive women

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