Detection of Hepatitis B and C in Primary Care

Presentation 2

January 2014

Notes
Learning Outcomes

Participants will be able to:-

• Identify groups of people who have a higher prevalence of Hepatitis B and C
• Recognise clinical presentations of these infections
• Discuss how we can detect Hepatitis B and C in primary care – case finding

Notes
Hepatitis C
Hepatitis C - routes of transmission

- Sharing of any injecting equipment – filters, spoons, water
- Use of crack pipes and snorting cocaine
- All drug users should be offered testing as some may not disclose their injecting drug use

Notes

Injecting drug use is the commonest route of transmission in Scotland and the UK. Sharing of any of the equipment used to inject drugs can result in transmission of Hepatitis C - not just needles and syringes. Some people who inject drugs may not be aware of the risk from sharing other paraphernalia. Other routes of using drug may also result in transmission - exposure to microscopic amounts of blood can occur when snorting drugs or using crack pipes.

Injecting drug use is highly stigmatised and some people may not wish to disclose this. Some people may not remember injecting on a single occasion. For this reason and due to the risk from snorting it is advised that all drug users are offered BBV testing - even if they say they have never injected.
Hepatitis C - routes of transmission (cont.)

- Sharing injecting equipment is the main risk
- Needle Exchange Surveillance Initiative (NESI) 2010 Report
  “to measure and monitor the prevalence of the Hepatitis C virus (Hepatitis C) and injecting risk behaviours among injecting drug users (IDUs) in Scotland”
- 27% of 1800 PWID (current), interviewed during 2011-12, reported having in last six months used filters, spoons or water that had previously been used by someone else
- This figure is lower than that reported in 2010 when the figure was 39%
- During June 2008 to June 2009 this had been 48%

Notes

One HPA estimate in England suggested approximately 31% of those with chronic Hepatitis C are current injectors, 57% are ex-injectors and 12% had never injected.

NESI is a survey of injecting drug users attending needle exchange sites across Scotland to determine injecting behaviour and also carries out anonymous Hepatitis C testing to determine prevalence of infection.

The proportion of PWID (current) reporting having shared a previously used needle/syringe (i.e.injecting with a needle/syringe that had previously been used by someone else) within the six months prior to interview was 11% in 2010 compared with 15% in 2008/2009. Sharing within the month prior to interview was 6% in 2010 and 9% in 2008/2009.


Hepatitis C prevalence in Scotland

- Significant regional variation across Scotland
- Prevalence of Hepatitis C antibodies in IDU 2009 (Hepatitis C in the UK 2011 report HPA/HPS)
  - 27% Lothian
  - 63% Glasgow
  - 31% Tayside
- Uptake of opiate substitution therapy and high levels of needle/syringe provision can achieve substantial reductions in the risk of Hepatitis C transmission among IDUs

Notes

Information on the prevalence of Hepatitis C infection was available from two data sources, on IDUs who have: (i) had a named HIV test, from an unlinked anonymous testing survey; and (ii) attended services providing injection equipment, from the Needle Exchange Surveillance Initiative.

Analysis of pooled data from across the UK, involving almost 1,000 IDUs surveyed in Greater Glasgow and Clyde NHS Board during 2008-2009, demonstrated that both the uptake of opiate substitution therapy and high levels of needle/syringe provision (i.e. a sterile needle/syringe for each injection) can achieve substantial reductions in the risk of Hepatitis C transmission among IDUs.
Hepatitis C - people who use drugs - other issues

• Anabolic steroid users may not present to traditional drug services or IEP sites but studies show high prevalence Hepatitis C infection
• Due to the prolonged natural history of Hepatitis C infection, drug use that resulted in infection may have been many years ago – may no longer identify themselves as a drug user
• How can we identify these groups in primary care?

Notes
Primary care should be involved in testing current drug users but we also need to think about reaching other groups who will not be attending drug misuse services. In particular people who may have used drugs many years ago and no longer identify themselves as a drug user, they may have used drugs very infrequently or even on a single occasion.
Hepatitis C cases in Scotland - other routes of transmission

- Piercings, tattoos and shaving where infection control is sub-optimal
- Vertical transmission – estimated to be a 5% risk with no interventions known to reduce this (breast feeding is not contra-indicated)
- Needlestick injuries with hollow bore needles (1 in 50 risk of transmission from known Hepatitis C source)

Notes

Although drug use is the commonest route of transmission, it is not the only one and we need to be mindful of other risks where blood to blood exposure could have resulted in transmission.
Hepatitis C cases in Scotland - other routes of transmission (cont.)

- Transmission rarely occurs through the sharing of personal items such as razors, nail clippers and toothbrushes that are contaminated with blood.
- Partners/children therefore have a very low risk from household transmission.

Notes

Transmission through this route is theoretically possible, so we advise against sharing of these items when a person is diagnosed with Hepatitis C. In reality this is a very low risk for transmission.
Hepatitis C cases in Scotland - other routes of transmission (cont.)

Sexual transmission:-

- Heterosexual transmission of Hepatitis C is possible but uncommon. The risk of transmission is greater if the person is co-infected with HIV or other STIs
- HIV co-infection, particularly in gay men, may make it more likely to transmit Hepatitis C to sexual partners
- More likely if blood or trauma in sex e.g. anal sex

Notes

Cohort studies on heterosexual monogamous couples showed low incidence of lifetime transmission - 0-2 per 1,000 years of sexual contact.


However there is increasing evidence of transmission sexually in MSM, especially if they are HIV positive.

van de Laar TJW, Matthews GV, Prins M, Danta M. Acute Hepatitis C in HIV infected men who have sex with men: an emerging sexually transmitted infection. AIDS 2010;24:1799–1812
Hepatitis C cases in Scotland - other routes of transmission (cont.)

- Receiving blood clotting factor concentrates prior to 1987 in UK
- Receiving blood and blood components before September 1991 and organ/tissue transplants before 1992 in UK
- Medical or dental treatment in countries where Hepatitis C is common and infection control may be poor e.g. Africa countries, South Asia (Pakistan, India) and Eastern Europe

Notes

All blood is now screened in the UK and Western countries but as we have said before people may have been at risk from blood or blood products prior to screening and from this or other unsterile medical treatment abroad.
Notes

So we are clear that we should be screening any one who has or is using drugs, who else should we be discussing testing with? Based on the risks that we have heard about the following people should be offered a test:

- MSM - men who have sex with men (especially if HIV+ve)
- People who have lived in South Asia, Africa, Eastern Europe
- Anyone who has had a tattoo (from an unregistered practitioner)
- Sexual partner/child/household contact of Hepatitis C patient OR drug user
- Anyone who received blood before screening
Notes

This map shows the prevalence of Hepatitis C infection across the world. Higher prevalence in parts of South America, Africa, South Asia and Eastern Europe.
Hepatitis C cases in Scotland - other groups who should be considered for testing?

- Anyone diagnosed with HIV or Hepatitis B
- Anyone who has been in prison
  
  Hepatitis C prevalence studies in Scotland’s prisons in 2012 - all adult prisons were surveyed. Overall, Hepatitis C antibody prevalence was 19%.

Notes

If you have been at risk of one BBV, you may have been at risk of the others and should be tested for them. Do not assume that someone will have been tested at the specialist service if they are being treated for a BBV.

Prisoners have a higher risk of Hepatitis C infection - likely to be due to higher incidence of injecting drug use.

Hepatitis C Prevalence and Incidence among Scottish Prisoners and Staff Views of its Management. Final Report. Authors: University of the West of Scotland et al. Published: May 2012
Clinical reasons for Hepatitis C testing

- Investigation of icteric Hepatitis
- Investigation of abnormal liver function tests (LFT)- studies suggest it is more effective to screen everyone with abnormal LFT
  **NB:** Normal LFT do NOT exclude Hepatitis C infection
- Investigation of chronic fatigue?

Notes

We should also think about Hepatitis C infection when attempting to diagnoses some clinical syndromes. Although acute Hepatitis is uncommon in Hepatitis C infection it can occur and jaundice may also occur due to chronic liver damage.

Hepatitis C is common enough that is should be part of a routine liver screen investigating abnormal LFTs.

Hepatitis B

Notes
Hepatitis B prevalence in Scotland

- Scotland has historically been a country of very low prevalence of Hepatitis B
  
  “the number of people ... with chronic Hepatitis B infection has increased considerably, (due to) a rise in the number of immigrants coming from countries in the world where the prevalence of Hepatitis B infection is high (particularly East Asia)”

Notes

Hepatitis B is largely an imported infection. Prevalence is increasing in Scotland due to immigration.

Notes

This map shows the areas of the world with a higher prevalence of Hepatitis B infection - South Asia, including China and Africa are where most of the imported infection in the UK derives from.
Hepatitis B prevalence in Scotland (cont.)

- 9000 - the number of people living in Scotland with chronic Hepatitis B infection
- Majority of infected individuals will be of Asian, African or Eastern European ethnicity
- A considerable proportion, around 46%, of infected persons in Scotland remain undiagnosed

Notes

Surveillance systems for Hepatitis B in Scotland have until recently been rudimentary or non existent. New systems are being developed and implemented.

Current figures are from Christian Schnier, senior epidemiologist at Health Protection Scotland, personal communication 2012
Hepatitis B - routes of transmission

- Hepatitis B is the most infectious BBV - 100 times more infectious than HIV

Notes

Unlike HIV, the Hepatitis B virus can survive outside the body for at least seven days. During this time, the virus can still cause infection if it enters the body of a person who is not protected by the vaccine.

Hepatitis B - routes of transmission (cont.)

• In endemic countries the majority of infections are VERTICAL, that is passed from mother to child in utero, in childbirth or through breast feeding
• In the UK the most common route of transmission is by unprotected penetrative vaginal, anal or oral sex without using a condom

Notes

In developing countries, common modes of transmission are:

• perinatal (from mother to baby at birth)
• early childhood infections (inapparent infection through close interpersonal contact with infected household contacts)
• unsafe injection practices
• unsafe blood transfusions
• unprotected sexual contact.

In many developed countries (e.g. those in western Europe and North America), patterns of transmission are different from those in developing countries. The majority of infections in developed countries are transmitted during young adulthood by sexual activity and injecting drug use. Hepatitis B is a major infectious occupational hazard of health workers.

The Hepatitis B virus is not spread by contaminated food or water, and cannot be spread casually in the workplace.

Hepatitis B - routes of transmission (cont.)

- Sharing any equipment used to inject, snort or smoke drugs i.e. needles, syringes, spoons, water, filters, straws, notes, crack pipes
- Using unsterile equipment and poor infection control procedures for tattooing, body piercing, ear piercing and acupuncture
Hepatitis B - routes of transmission (cont.)

- Undergoing medical or dental treatment in some countries where Hepatitis B is common and where infection control is inadequate
- Sustaining an occupational injury involving transmission of blood e.g. needlestick injuries
- Bites that break the skin
- Transmission may rarely occur through the sharing of personal items such as razors, and toothbrushes

Notes

Other, much rarer risks.
Who should be considered for testing?

Notes

Audience should be asked to suggest risk groups e.g.:

- Immigrants and family members of immigrants from higher prevalence countries
- MSM
- People with frequent change of sexual partners, sex industry workers
Who should be considered for Hepatitis B testing?

- Immigrants and family members of immigrants from higher prevalence countries
- MSM
- People who have used drugs
- People with frequent change of sexual partners, sex industry workers
- People who have had medical or dental treatment in countries where sterilisation of equipment may not have been satisfactory
- People who have undergoing piercing or tattooing in circumstances where sterilisation of equipment may not have been satisfactory
- Household contacts of Hepatitis B infected patients

Notes

MSM and IDU important but low prevalence in UK

**MSM**: The prevalence of Hepatitis B infection in MSM is higher than in the general population. During the 1980s, the prevalence of Hepatitis B infection among MSM ranged from 34.0% to 81.7%, while HBsAg prevalence was 3.0% to 8.7%.

**IDU**: During the 1990s, several hundred new transmissions of Hepatitis B infection were diagnosed annually in Scotland, during a time when outbreaks of infection among injecting drug users were relatively frequent.
Clinical reasons for Hepatitis B testing

- Investigation of acute icteric Hepatitis
- Investigation of abnormal LFTs
- People about to undergo immunosuppressive therapy or renal dialysis
- All pregnant women to prevent vertical transmission
- Investigation of sexually transmitted disease
- Co-existent Hepatitis C or HIV infection

Notes