5.3 HEPATITIS C
NOTIFIABLE

RECOMMENDATIONS

Offer test for anti-HCV to:

- All migrants who originate from countries with a prevalence of chronic hepatitis C of 3% or higher
- Those with a history of hepatitis C risk exposure/behaviour including people who inject drugs (PWID) and men who have sex with men (MSM)

Offer test for HCV RNA:

- All those who have a positive anti-HCV result

Refer all positive cases to specialist services for review.
Vaccinate those who are non-immune to hepatitis A and/or hepatitis B with hepatitis A and/or hepatitis B vaccine.

Epidemiology

Worldwide, chronic hepatitis C infection is a major cause of chronic liver disease and death. About 3% of the world's population is infected with hepatitis C (figure 5.3.1).[1] Egypt has the highest reported prevalence at 22%.[2] Hepatitis C is transmitted by blood and primarily occurs through sharing of needles and drug paraphernalia by people who inject drugs (PWID), and to a lesser extent through sex with an infected partner, occupational exposure and maternal-foetal transmission.[3] In developing countries transmission may be more likely to occur due to unsafe therapeutic injections and transfusions.[2]

In Ireland the prevalence of chronic hepatitis C infection is estimated to be 0.5-1.2% which is a similar level to that found in most northern European countries.[4] A prevalence of anti-HCV of 1.5% was found in asylum seekers screened in reception centres in the former Eastern Regional Health Authority (ERHA) area in the period 1999-2003.[5]

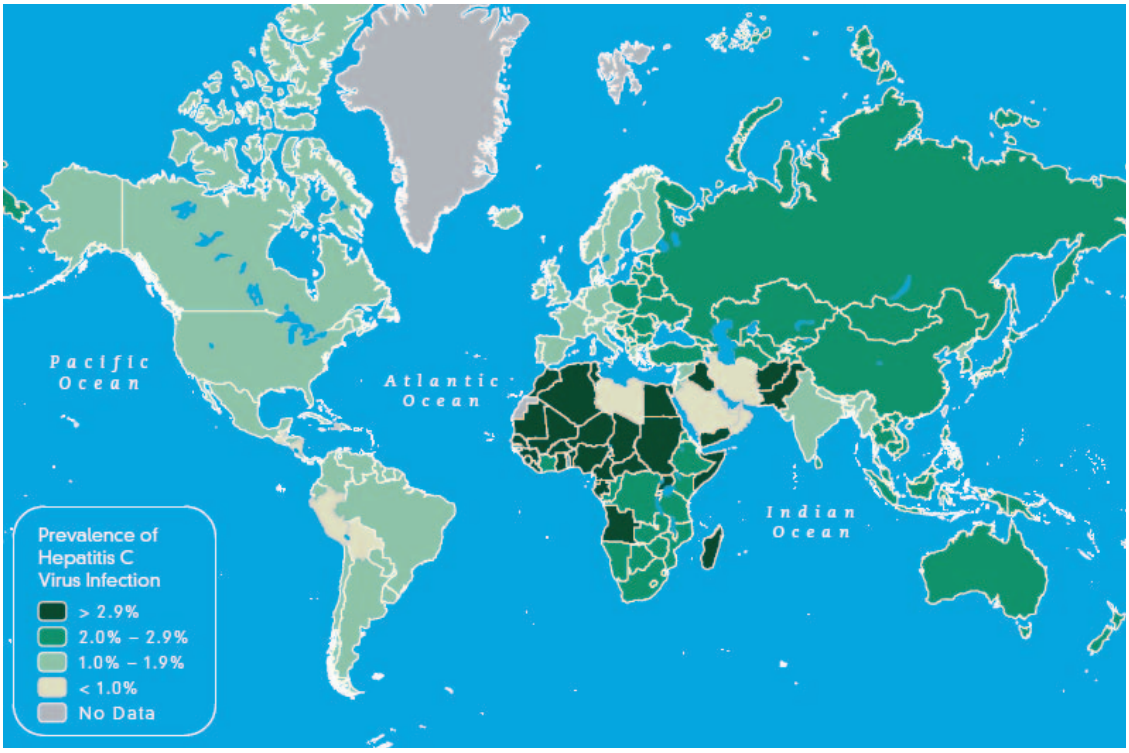

Figure 5.3.1 Prevalence of hepatitis C worldwide

Source: Centers for Disease Control and Prevention. CDC Health Information for International Travel 2012, New York: Oxford University Press; 2012

Rationale for assessment

Hepatitis C is a condition with often debilitating consequences. Although currently there is no effective vaccine for the prevention of hepatitis C, there are simple tests available for diagnosis and there are effective treatments available which can clear the virus in the majority of cases. The following are the main points behind the rationale for assessing migrants for hepatitis C.

- Many migrants may come from developing countries that use unsafe injection practices or blood transfusions putting them at risk of hepatitis C infection.[2]
- Migrants may also be at increased risk of co-infection with HIV and/or hepatitis B, increasing the chances of progression to cirrhosis or hepatocellular carcinoma.[6]
- It is a disease with serious consequences. Chronic infection develops in approximately 75% of those who are infected. Between 5% and 20% of those who are chronically infected will develop cirrhosis after approximately 20 years of infection. Of those with cirrhosis approximately 4% progress to decompensated liver disease annually and 1.6% develop hepatocellular carcinoma annually.[7]
- For those identified with infection, specialist services and treatments are available to improve disease prognosis and prevent ongoing spread.
- Treatment with a combination of peginterferon and ribavirin induces sustained virologic response (SVR) rates of 40-50% in those with genotype 1 and of 80% or more in those with genotypes 2 and 3 infections. New treatment regimens which include protease inhibitors have greatly improved SVR rates for genotype 1. Interferon free, all oral combinations which have recently become available have been shown to be capable of SVR rates exceeding 90%.[8] An SVR is regarded as a virologic cure and is associated with improved morbidity and mortality.[9]

Assessment

The SAC sub-committee endorses the following recommendation on hepatitis C assessment from the Canadian guidelines for immigrants and refugees.[10]

Hepatitis C assessment by testing antibody to hepatitis C virus (anti-HCV) should be offered to:

- All migrants who arrive from countries with an estimated prevalence of hepatitis C virus infection of ≥3%. These countries are mainly in Central and East Asia, North Africa and the Middle East.

The SAC sub-committee also recommend that hepatitis C assessment by testing antibody to hepatitis C virus (anti-HCV) should also be offered to the following at risk groups:

- People at risk of hepatitis C exposure, especially PWID, men who have sex with men (MSM) and those exposed to unsafe therapeutic injections.

The anti-HCV test has a high sensitivity (97%) and specificity (99%). The presence of anti-HCV indicates current or past infection. Anyone found to be positive for anti-HCV should have a follow-up test for HCV RNA and the person should be referred to a specialist service if RNA positive. A positive RNA test indicates viraemia, either due to acute or chronic infection.

Vaccination

At present there is no vaccine available to prevent hepatitis C infection. However, people with chronic hepatitis C infection who are non-immune to hepatitis A and/or B should be offered hepatitis A and/or B vaccine.[11]

References

(1) Centers for Disease Control and Prevention. CDC Health Information for International Travel [internet]. New York: Oxford University Press; 2012. Available from: http://wwwnc.cdc.gov/travel/page/yellowbook-2012-home.htm.

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(4) Thornton L, Murphy N, Jones L, Connell J, Dooley S, Gavin S, et al. Determination of the burden of hepatitis C virus infection in Ireland. Epidemiol Infect. 2012;140:1461-8.

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(8) Chung RT, Baumert TF. Curing chronic hepatitis C – the arc of a medical triumph. N Engl J Med. 2014; 370:1576-1578

(9) Ghany MG, Nelson DR, Strader DB, Thomas DL, Seeff LB. An update on treatment of genotype 1 chronic hepatitis C virus infection: 2011 practice guideline by the American Association for the Study of Liver Diseases. Hepatology. 2011;54(4):1433-4.

(10) Pottie K, Greenaway C, Feightner J, Welch V, Swinkels H, Rashid M, et al, and co-authors of the Canadian Collaboration for Immigrant and Refugee Health. Evidence-based clinical guidelines for immigrants and refugees. CMAJ [Internet]. 2011; 183(12):E824-E925. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3168669/pdf/183e933.pdf

(11) National Immunisation Advisory Committee. Immunisation Guidelines for Ireland 2013. Available from: http://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/immunisationguidelines.html

Appendix E. Hepatitis C prevalence by region and country

Prevalence of anti-HCV by Global Burden of Disease Regions

Region	Anti-HCV prevalence estimates (%)	95% Confidence Interval
Central Asia	3.8	3.0-4.5
East Asia	3.7	3.1-4.5
North Africa & Middle East	3.6	3.2-4.1
South Asia	3.4	2.6-4.4
Eastern Europe	2.9	2.3-3.5
West Sub-Saharan Africa	2.8	2.4-3.3
Australasia	2.7	2.2-3.2
Oceania	2.6	2.1-3.1
Central Europe	2.4	2.0-2.8
Western Europe	2.4	2.2-2.7
Central Sub-Saharan Africa	2.3	1.6-3.1
Caribbean	2.1	1.6-2.6
South Sub-Saharan Africa	2.1	1.7-2.5
Andean Latin America	2.0	1.4-2.7
East Sub-Saharan Africa	2.0	1.6-2.4
South East Asia	2.0	1.7-2.3
Central Latin America	1.6	1.3-1.9
Southern Latin America	1.6	1.1-2.2
High income Asia Pacific	1.4	1.2-1.5
High Income North America	1.3	1.1-1.6
Tropical Latin America	1.2	1.0-1.4

Source: Mohd Hanafiah K, Groeger J, Flaxman AD, Wiersma ST. Global epidemiology of hepatitis C virus infection: new estimates of age-specific antibody to HCV seroprevalence. Hepatology 2013;57:1333-1342.

List of countries with estimated anti-HCV prevalence ≥3% (2010)

Country	Anti-HCV (%)
Angola	5
Armenia	4
Azerbaijan	4
Bolivia	4.7
Burkina Faso	5.2
Burundi	11.3
Cambodia	4.1
Cameroon	13.8
Cape Verde	3
Chad	5
Congo	5.5
Democratic Republic of Congo	6.4
Egypt	14
Estonia	5
Gabon	9.2
Georgia	6.7
Grenada	5
Guinea	5.5
Guinea-Bissau	4.7
Haiti	4.4
Indonesia	3.9
Iraq	3.21
Italy	3.2
Ivory Coast	3.3
Kazakhstan	3.2
Kuwait	3.1
Kyrgyzstan	4
Liberia	3
Malawi	6.8
Mali	3.3
Mongolia	10.7
Mozambique	3.2
Niger	3.2
Pakistan	5.9
Romania	4.5
Russia	4.1
Rwanda	4.9
Sao Tome and Principe	10
Senegal	3
Tajikistan	4
Togo	3.3
Trinidad and Tobago	3.9
Turkmenistan	4
Uganda	6.6
Ukraine	4
United Republic of Tanzania	3.2
Uzbekistan	6.5
Western Sahara	3

Source: Lavanchy D. Evolving epidemiology of hepatitis C virus. Clin Microbiol Infect 2011;17:107-115.