



Managing hepatitis C in the community

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Summary

Infection with hepatitis C can lead to chronic hepatitis and cirrhosis of the liver, however this progression is not inevitable. Health professionals need to consider who may be at risk of the disease as the infection can be asymptomatic. If hepatitis C is diagnosed and the patient is found to have significant liver damage, treatment with ribavirin and injectable peginterferon alfa is indicated. These drugs can produce a sustained response in up to 90% of patients depending on the viral genotype. During treatment it is important to reduce other stresses on the liver such as a high alcohol consumption.

Key words: antiviral drugs, liver.

(*Aust Prescr* 2006;29:36–9)

Introduction

Hepatitis C is a worldwide problem and in Australia over 280 000 people are estimated to have been infected by the hepatitis C virus. Not everyone infected with the virus requires drug treatment, but those that do may be untreated, despite the fact that combination antiviral therapy can achieve a sustained response in up to 90% of those infected with particular genotypes of the virus. This significant disparity between the number of infected individuals and the number treated exists despite a significant effort being directed towards improving the management of hepatitis C in the community.^{1,2,3,4,5,6}

While many people have asymptomatic infection, a significant minority (15–20% over the course of 30 years) will progress through chronic hepatitis to cirrhosis and complications of cirrhosis, namely liver failure and hepatocellular carcinoma. Hepatitis C is currently the most common indication for liver transplantation in Australia and many other Western countries. This situation is unlikely to change in the immediate future.

Diagnosing hepatitis C

The majority of patients who contract hepatitis C are asymptomatic and unaware that they have the virus and that they can transmit the virus to others. Certain groups of people are at increased risk of being exposed to the virus and practitioners should discuss hepatitis C testing with these groups (see box).

It is important to routinely ask all patients questions about the possibility of blood-to-blood contact and possible blood-borne virus exposure to allow an appropriate assessment of the need for testing for blood-borne viruses. Before testing, the meaning, implications, natural history, treatment options and notification requirements of a positive result need to be discussed.

Laboratory tests (Fig. 1)

The most appropriate test for screening for hepatitis C is the hepatitis C antibody test. A positive hepatitis C antibody result with abnormal liver function tests gives a greater than 80% likelihood that the patient has been infected. This can be confirmed with a test for viral RNA. If the patient is considering treatment, a hepatitis C genotype and viral load can be ordered before commencing therapy. In Australia, 55% of patients are infected with genotype 1 and 35% with genotype 3.

After the diagnosis

Once a patient has been identified as hepatitis C RNA positive with abnormal liver function tests, discuss the possibility that they may have significant liver problems and may need to consider antiviral therapy. Patients diagnosed with hepatitis C require a detailed history of drug use including their alcohol consumption. Other causes of abnormal liver function tests need to be explored and these include non-alcoholic fatty liver disease, medication-induced liver dysfunction and genetic disorders such as haemochromatosis and alpha₁ antitrypsin deficiency. Patients need to be given advice on their alcohol intake if it is above recommended safe drinking levels and patients need to be advised on managing obesity and regulating blood lipids.

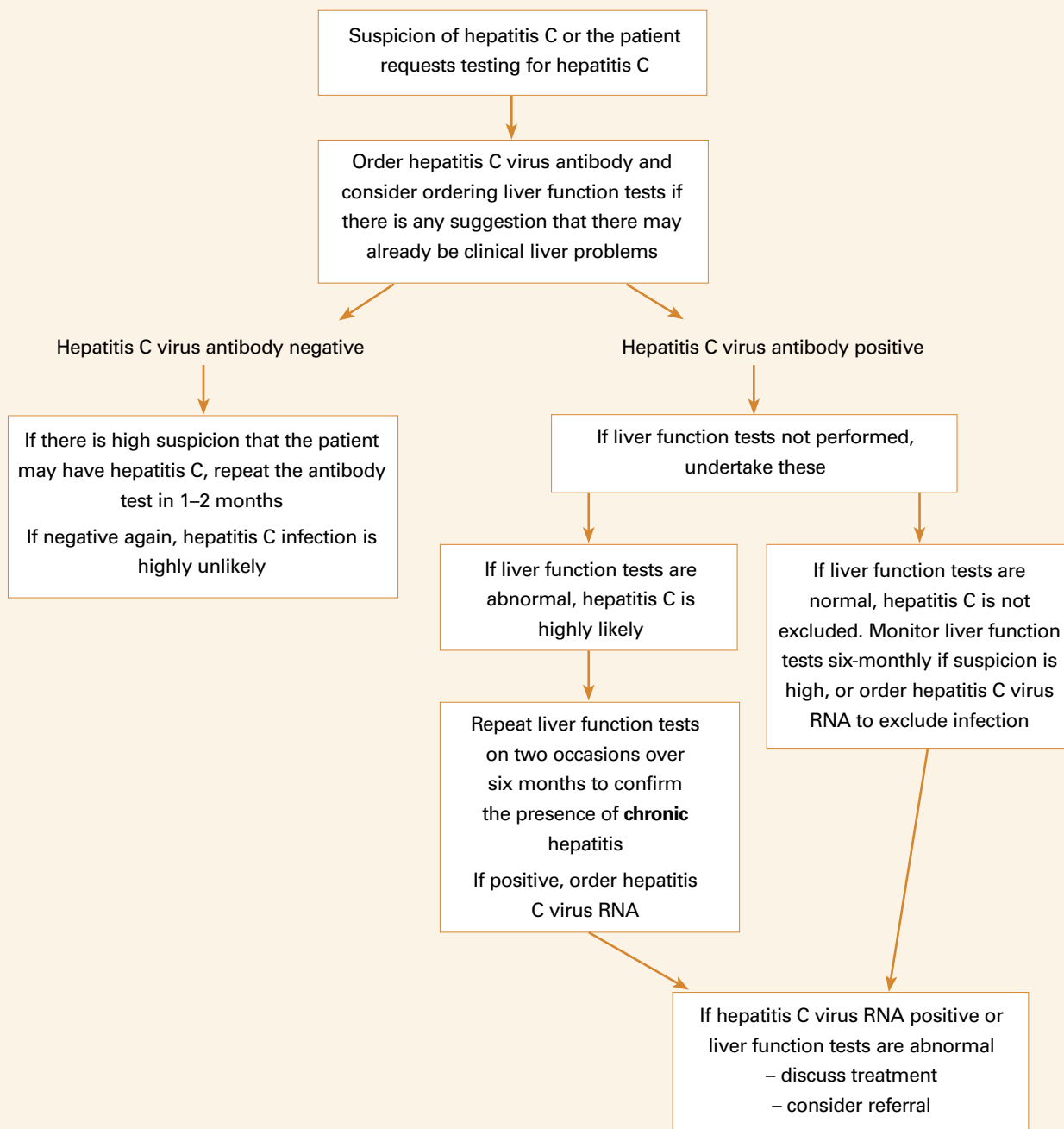
Consider discussing and testing for hepatitis C in these groups

People who have:

- received a blood product in Australia before 1990
- received blood products in other countries
- ever injected drugs
- ever been in a corrections facility
- been born in countries with a high prevalence of hepatitis C
- a partner with hepatitis C
- had multiple sexual partners⁴
- tattooing and body piercing

Fig. 1

Pathway for testing for hepatitis C



Risk factors for more progressive disease include being male, overweight, consuming alcohol regularly and being infected at an age greater than 45 years. Conversely, females infected at a young age who do not drink and who are of average body weight may have a very slow progression of their liver disease over 20–30 years.⁷

Discuss what treatments offer

Treatment options should be discussed with all patients with chronic hepatitis C. Patients with normal liver function tests and no signs of liver disease may decide not to undergo treatment

and this decision should be supported. Many patients can be assured that this deferring of treatment is appropriate as liver disease progresses slowly in the majority of patients. They can be observed with six-monthly liver function tests. A small number of patients with normal liver function tests still choose to have therapy to eliminate the risk of infecting others and this indication is now subsidised by the Pharmaceutical Benefits Scheme (PBS).

The combination of injectable pegylated interferon alfa-2a or -b and oral ribavirin can provide sustained response rates of 45–90% in patients with hepatitis C (Table 1). A sustained viral

Fig. 2

Pathway for referral for treatment to liver clinic

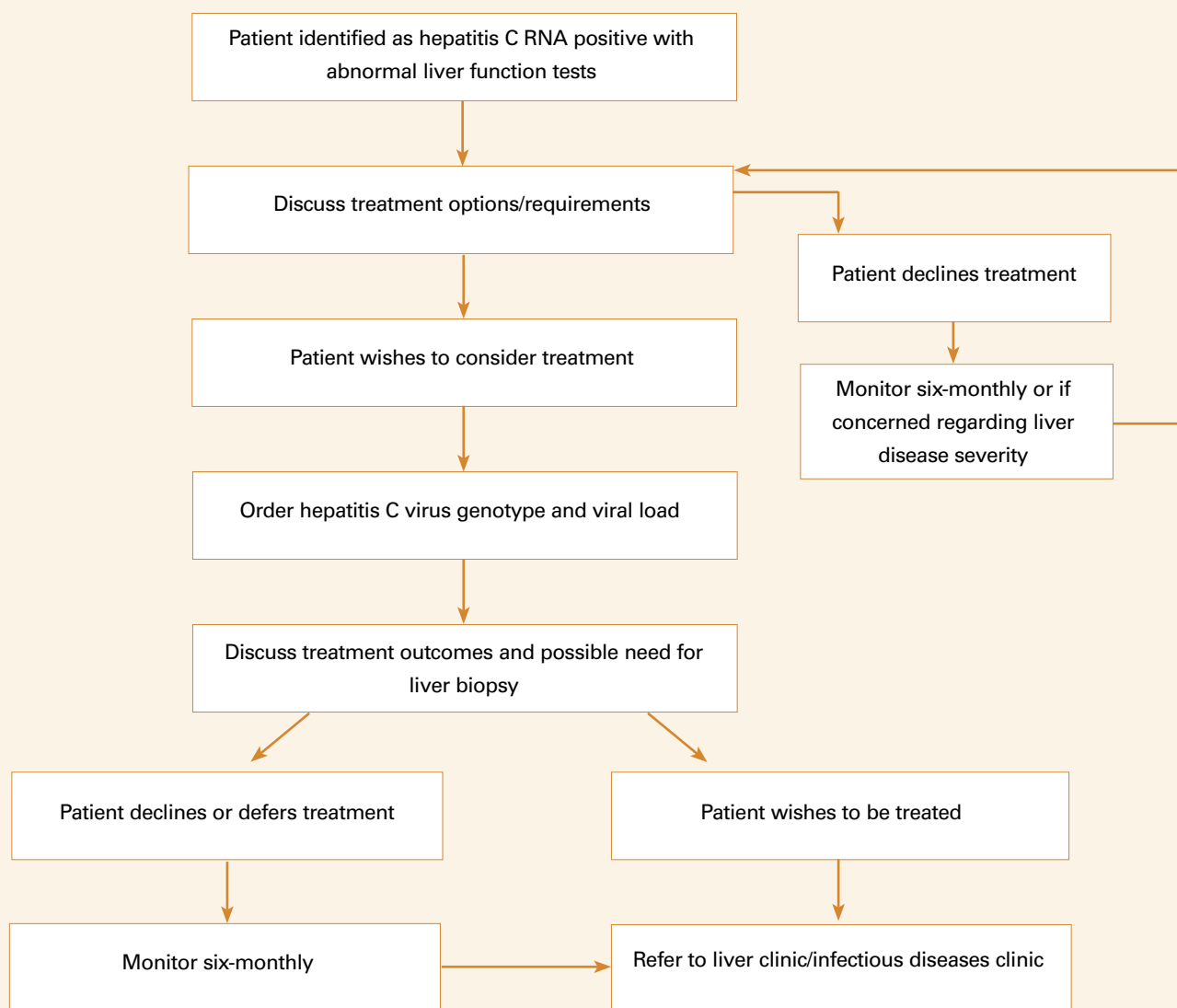


Table 1

Outcomes of combination therapy (pegylated interferon and ribavirin)

Genotypes 2 and 3

| | |
|------------------------------------|----------|
| Duration of therapy | 6 months |
| Expected sustained viral response* | 70–90% |

Genotypes 1 and 4

| | |
|------------------------------------|-----------|
| Duration of therapy | 12 months |
| Expected sustained viral response* | 40–50% |

* there is no hepatitis C RNA in the serum six months after completing treatment

response is defined as the absence of hepatitis C RNA in serum and liver six months after cessation of therapy. Relapse within six months of stopping therapy occurs in 10–20% of those with genotype 2 and 3 infection and in 50–55% of those with genotype 1 and 4 infection. While 5% of patients may relapse in the period between six and 12 months after ceasing therapy, those that remain hepatitis C RNA negative at 12 months can expect their sustained response to be maintained for years with the longest follow-up now extending for greater than 15 years.

Who should be referred for hepatitis C antiviral therapy? (Fig. 2)

All patients with signs of liver disease of any severity and those who wish to consider treatment should be referred to a liver clinic. Now that liver biopsy is no longer required to access

PBS-subsidised treatment, it is probable that a greater number of patients will request referral to consider antiviral therapy. Many patients with signs of significant liver disease will still be recommended to undergo a liver biopsy as the presence of cirrhosis can modify the approach to the use of interferon and ribavirin.

Will most patients with hepatitis C decide to undergo treatment?

At present some patients, having been given advice about their liver function and the treatment outcome, decide to defer treatment. This is a reasonable decision for many patients, particularly those who have a genotype 1 or 4 infection which responds less well to current therapies. However, if a patient has clear clinical signs or biochemical evidence of significant liver disease, this decision should be questioned. If necessary these patients can be referred for further discussion with a second clinician with an interest in hepatitis C to ensure that they are receiving at least two opinions on whether to defer treatment or not.

Adverse reactions to treatment

Some patients tolerate therapy well and develop few adverse effects from their course of therapy. A significant percentage do develop troublesome adverse effects which include mood swings, irritability, headaches, insomnia, flu-like symptoms, dry skin, myalgia, arthralgia and thinning of the hair. Treatment can cause exacerbation of epilepsy, diabetes and psoriasis.

A small percentage of patients develop serious adverse effects which include anaemia, thrombocytopenia, leucopenia, depression and psychosis. Sudden haemolytic anaemia can precipitate cardiovascular symptoms in those who have previously not had evidence of clinical ischaemic heart disease. In older patients it is wise to explore their family history of coronary artery disease and to perform an ECG if there is any suggestion that they may have asymptomatic coronary artery disease.

Follow-up

The care of patients is often shared between the liver unit and general practitioners. To assist general practitioners with monitoring their patients, liver units in Australia will normally provide a protocol for testing. Patients should be tested for liver function, full blood count and thyroid function second monthly and if there is concern other investigations may be ordered.

Conclusion

Hepatitis C itself is often not going to cause severe liver disease. It is the combination of the viral infection plus factors such as alcohol excess, obesity, diabetes and haemochromatosis that leads to more severe liver disease. Addressing the secondary factors will lead to significant changes in liver function thus

allowing a decision on requirements for antiviral therapy to be made in a more rational way.

References

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Further reading

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Conflict of interest: none declared

See also **Dental notes** page 52

Patient support organisation

Australian Hepatitis Council

The states and territories have independent Hepatitis Councils which provide information, support, referral and counselling about hepatitis C. The Australian Hepatitis Council website contains many resources, fact sheets and links.

Website: www.hepatitisaustralia.com

Self-test questions

The following statements are either true or false (answers on page 55)

1. Most patients with hepatitis C will develop cirrhosis within 20 years.
2. A patient's lifestyle may affect the response to treatment for hepatitis C.