

## HEPATITIS C – THE WIDER CONTEXT

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Hepatitis C is a major public health problem affecting both the developed and the developing world with some countries in Africa having a prevalence of around 15% of the general population. The prevalence in Western Europe and the US is around 1–2%. Therefore around 2.7 million people have the infection in the US; 300,000 people in the UK; and approximately 40,000 in Scotland. It is already the most common indication for orthotopic liver transplantation worldwide, although this is not yet the case in Scotland. The epidemic of hepatitis C infection and its consequences is around ten years behind the US, due mainly to the later arrival of intravenous drug abuse in the UK.

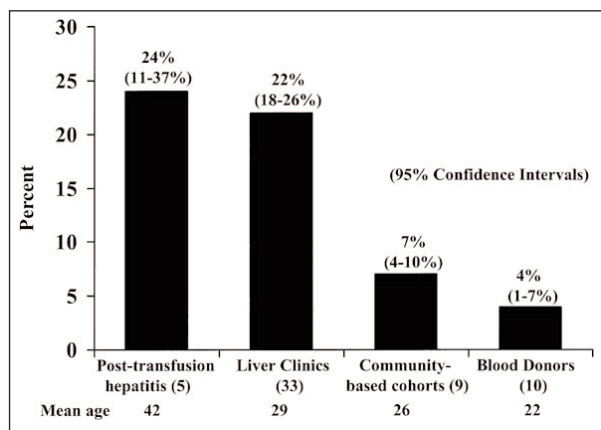
Over the last few years there have been major conferences and various guidelines produced about the management of the hepatitis C problem.<sup>1–3</sup> The recent meeting in the College, the consensus statement of which is published on pages 196 and 197, was an attempt to highlight the problems and suggest some ways of tackling them in Scotland at this time. The meeting focused on five specific questions rather than attempt to cover all aspects of hepatitis C. The global scale of the problem was acknowledged at the meeting and while some of the statements made will apply to all areas of the world, others may have to be interpreted at a local level depending on the healthcare system.

The majority of intravenous drug users (IDUs) in Scotland have been infected with hepatitis C and this is the most common route of transmission. The HIV epidemic did have some influence on injecting practices in the 90s but recent evidence suggests that sharing of injecting materials has led to an increase in new cases of hepatitis C infection particularly in young men. The consensus document is clear in its recommendation on targeting this population in order to educate them about the risks of infection, routes of transmission and advice about limiting progression by reducing alcohol intake and considering prevention against other potential blood borne infections such as hepatitis B. These strategies have never been subjected to trials of effectiveness but inherently seem sensible approaches to attempt to control this epidemic.

From the above discussion it is clear that the largest group of individuals who are chronically infected and who would be eligible for treatment are the former IDUs. The consensus statement highlights these individuals as the most appropriate to test

opportunistically and also the need for appropriate discussion. There are some drawbacks to knowing that you have chronic hepatitis C infection, such as influencing life assurance and other issues relating to this, however, the previously held notion that treatment was not beneficial can no longer be used as an excuse not to test by the healthcare professional as most individuals would accept a 50% chance of curing of a potentially life-threatening illness. Therefore, patients who have self-injected intravenous drugs in the past should be actively encouraged to be tested.

At present around 250 patients are treated per year in Scotland with a cure rate of 50%. Clearly only a minority of individuals infected are receiving therapy. The consensus statement highlights this and touches on some of the issues surrounding it. The progression of the infection through chronic inflammation to cirrhosis is still an uncertain process with various incidences reported at 20 years from infection as indicated in Figure 1.



**FIGURE 1**

The progression from infection to cirrhosis at 20 years in various groups of individuals. Figure reproduced from Seeff LB. Natural history of chronic hepatitis C. *Hepatology* © 2002.<sup>4</sup> Reprinted by permission of Wiley-Liss, Inc., a subsidiary of John Wiley & Sons, Inc.

The variability of progression and the uncertainty surrounding this has been an issue for some patients who have considered that other treatments, which are more effective and easier to take, may be around the corner. The consensus statement indicates effective vaccines are a long way off but fails to emphasise the fact that more effective, safer treatments are also unlikely to appear within the next 5–10 years.

One of the other reasons why patients were not keen for treatment was the fact that they required a liver biopsy before they could be considered. The consensus document is the first to be explicit in its statement that biopsy is not a requirement for treatment. It is bold and heartening to see this statement in the key points of the consensus document and hopefully this will encourage more patients to seek treatment. However, biopsy is still a useful investigation for informing patients about the stage of their disease if they wanted to consider putting off treatment for a number of years or in other situations where management of the patient is likely to be affected.

There are wide variations in the number of patients treated throughout Europe. France and Ireland have taken the problem very seriously and made central funds available for drug costs for all patients who are eligible and willing to undergo treatment. In Scotland, however, funding for the management of hepatitis C has had to be found within existing Health Board budgets, and this has led to substantial delays in therapy for some patients. As these patients often come from the more socially deprived areas they do not have a particularly potent political lobby and attract less attention than other, more 'acceptable', conditions. Central funding is probably the most equitable and logical route to planning treatment but may require to be phased.

The consensus highlights the difficulties in engaging these patients in the healthcare services as they stand at present, with more than 50% of patients not even attending their first clinic visit. If we are to be serious about tackling this problem then more innovative methods of reaching these individuals will have to be employed. In areas such as Trent Valley, England, successful treatment programmes have been established in the prisons. Such opportunistic strategies will have to be employed if this epidemic is to be controlled.

Once patients are started on a course of treatment a variety of problems may arise preventing successful eradication of the virus. Treatment related side-effects are common and skilled nurse practitioners are required to monitor, advise and help patients persevere. Individuals with genotype 2 or 3 hepatitis C infection, who only require six months of therapy, are likely to tolerate moderate side-effects well and it may be possible to have such individuals treated in primary care allowing the more difficult cases to be dealt with in the secondary care setting. It has become clear that the longer patients can take the recommended doses of both ribavirin and interferon the more likely the chance of success. While there is accumulating evidence that supporting neutrophil counts and haemoglobin levels with granulocyte colony stimulating factor and erythropoietin will permit higher doses of treatment this will, however, add to the expense of treatment.

Patients with advanced fibrosis have a lot to gain by clearing the virus, and the extra expense for a month or two is certainly worthwhile as end-stage liver disease or hepatocellular carcinoma is likely to be avoided.

Liver transplantation is successful in treating patients with liver failure from hepatitis C but donor shortage is becoming a significant problem. Last year in Scotland there were more than double the number of deaths on the waiting list for liver transplantation than in any other year. Liver failure from hepatitis C infection is increasing and will only exacerbate the problem that already exists in liver transplantation in the UK. It does appear that attempts to improve the donor rate have not been successful. The recurrence of hepatitis C in the new liver is universal although the progression to graft failure is variable with around one in five having a rapid course over five years. One of the major risk factors in progression of the recurrent disease is the age of the donor liver. Older donor livers deteriorate much more quickly than younger donor livers. It may well be that young hepatitis C positive donor livers should be used in those recipients who already have the infection. This policy has already been adopted in the US without any difference in graft outcome. The other strategy that may have to be employed is that of living donor donation where a relative of the patient listed for transplantation donates half of their liver to their relative. This is a major operation for the donor but may be a necessary step to prevent more deaths on the waiting list and is already popular in mainland Europe and the US.

There is no doubt that the consensus statement clearly identifies hepatitis C as a major public health problem in Scotland. The way forward from here will require concerted effort to reduce new infections, identify those already infected and ensure effective management and treatment of those with chronic infection before they develop end-stage disease.

## REFERENCES

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