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# Treatment of hepatitis C virus infection in drug addicts

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Injected drug users constitute the biggest category of hepatitis C virus (HCV) cases in the United States. This group also has the greatest number of new infections per year. It is estimated that about 80%–95% of all users of needles are infected with HCV. Eighty percent of intravenous drug users are infected with HCV during their first year of using needles. The prevalence of hepatitis C is 100% among those that have used intravenous drugs for more than 8 years. This means that 1.5–2 million of the 15 million users of illegal drugs in the United States are infected with HCV.

The discussion about whether HCV treatment should be offered to users of illegal drugs is confounded by a number of myths and falsehoods. For instance, it has been said that only drug addicts who use needles are at risk of acquiring HCV. This is false. It is estimated that the prevalence of HCV infection in people who administer cocaine nasally is 33%. Recent studies have shown that about 77% of cocaine users have chronic hepatitis C. Likewise, the use of amphetamines such as methamphetamine (speed or crystal-met) has been associated with increased transmission of HCV and acquired immunodeficiency virus (HIV) in homosexuals.2 What is true is that some transmission routes of HCV in illegal substances users are not clear. Drug users are stigmatized and have a high prevalence of health problems. Arguments for denying this population treatment for chronic hepatitis C may be based on prejudice and discrimination, from which health professionals are not exempt. We should only reject treatment on the basis of research data. To deny treatment to a population may condemn them to severe liver disease.4,5

# What arguments have been proposed to deny treatment to active drug users?

Drug users have a high prevalence of psychiatric disease and a high risk of severe complications during HCV treatment.

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Drug addicts do have a high prevalence of psychiatric diseases such as depression, bipolar disorder, and anxiety. However, it is also true that patients with chronic hepatitis C who are not active addicts have a high prevalence of psychiatric disease, especially depression (24%–30%).<sup>6-8</sup> No study has proved that the number or severity of psychiatric events of active users of methadone differs from that of patients with chronic hepatitis C who are not active users of methadone.

#### Drug users have poor adherence to HCV treatment.

This is a myth. Many studies of addicts and users of methadone have shown that adherence of this group to HCV treatment is no different from that of people who are not addicted to drugs. Moreover, recent studies have failed to detect significant differences between users and nonusers of needles in respect of the results of viral load tests and liver biopsies, and in sustained viral responses.<sup>9,10</sup>

### Drug users are reinfected with HCV.

It is thought that active users of drugs will invariably be re-infected with other HCV genotypes after attaining sustained viral responses. The risk of re-infection is lower if the user is in involved in a needle exchange program and has been instructed on sterile practices. It is necessary to instruct the patient about the risk of reinfection when sharing materials such as «cookers» (spoons, bottle caps, etc.) and cotton (used as a filter).<sup>2,11,12</sup>

# Should the patient be in rehabilitation before initiating treatment?

As with any patient with chronic hepatitis C, delayed treatment is not detrimental if the degree of liver damage is slight. If the patient requires treatment and is willing to stop using illegal drugs, delayed treatment is only justified if there is a defined plan of rehabilitation. There are no clinical studies of HCV treatment before, during, and after rehabilitation. There is a shortage of rehabilitation programs: methadone programs can only

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accommodate 15%–20% of heroin addicts. If HCV treatment for individuals who have no access to rehabilitation programs or elect not to participate in them is delayed indefinitely, we are abandoning those most affected by HCV epidemics and those who probably suffer from severe liver disease. 13,14

## What has our experience with HCV-positive drug addicts been?

In our center, we achieve positive results with active addicts using the following action plan.

- 1. Users of injectable drugs or cocaine are briefed on the benefits of rehabilitation.
- 2. Patients are required to undergo psychiatric evaluation and must be certified stable before treatment is initiated.
- 3. A program or professional is identified to participate actively in the management of depression and any other psychiatric condition that arises during treatment for chronic hepatitis C.
- 4. We delay treatment for 6 months or more to evaluate the interest and reliability of the patient-not to document abstinence from drugs.
- 5. If possible, the immediate family is involved in the treatment to reinforce adherence.
- 6. Treatment is initiated without evidence of discontinued use of illegal substances, and no drug tests are conducted during the treatment.

Ninety-eight percent of enrolled HCV-positive drug users complete the treatment, which is greater than the completion rate of HCV-positive people who are not drug users.

#### Conclusion

Drug users should be treated in the same way as any other HCV patient, and an analysis of the risks and benefits of treatment should be done. The decision to proceed with treatment should be made by the patient and his/her doctor. These patients should be offered rehabilitation treatment. As with any other HCV patient, psychiatric care before and during treatment will result in better adherence and results. The determination of whether to treat a patient should be made on a case-by-case basis; the active use of drugs is not a valid criterion for exclusion from treatment for chronic hepatitis C.<sup>15-17</sup>

### Recommendations of the consensus panel

Does methadone modify the response to treatment? The use of methadone during antiviral treatment of a patient infected with HCV does not modify the efficacy of treatment.

Evidence quality: 2

What is the ideal time to initiate treatment for hepatitis C in this group of patients?

The ideal is to initiate treatment once the subject has proved adherence to management of addiction for six months.

Evidence quality: 2

Is the adherence to treatment of these patients satisfactory?

Under management, adherence to antiviral treatment for patients with addictions is as good as that of HCV patients who have no addictions.

Evidence quality: 2

#### References

- NIH Consensus Statement on Management of Hepatitis C: 2002. NIH Consens State Sci Statements 2002; 19(3): 1-46.
- Robaeys G, Buntinx F. Treatment of hepatitis C viral infections in substance abusers. Acta Gastroenterol Belg 2005; 68(1): 55-67.
- Schaefer M, Heinz A, Backmund M. Treatment of chronic hepatitis C in patients with drug dependence: time to change the rules? Addiction 2004; 99(9): 1167-75.
- De Bie J, Robaeys G, Buntinx F. Hepatitis C, interferon alpha and psychiatric co-morbidity in intravenous drug users (IVDU): guidelines for clinical practice. *Acta Gastroenterol Belg* 2005; 68(1): 68-80.
- Verrando R, Robaeys G, Mathei C, Buntinx F. Methadone and buprenorphine maintenance therapies for patients with hepatitis C virus infected after intravenous drug use. *Acta Gastroenterol Belg* 2005; 68(1): 81-5.
- Mauss S, Berger F, Goelz J, Jacob B, Schmutz G. A prospective controlled study of interferon-based therapy of chronic hepatitis C in patients on methadone maintenance. *Hepatology* 2004; 40(1): 120-4.
- Schaefer M, Schmidt F, Folwaczny C, Lorenz R, Martin G, Schindlbeck N, Heldwein W, et al. Adherence and mental side effects during hepatitis C treatment with interferon alfa and ribavirin in psychiatric risk groups. Hepatology 2003; 37(2): 443-51.
- Robaeys G, Buntinx F, Bottieau E, Bourgeois S, Brenard R, Colle I, De Bie J, et al. Guidelines for the management of chronic hepatitis C in patients infected after substance use. Acta Gastroenterol Belg 2005; 68(1): 38-45.
- Wejstal R, Alaeus A, Fischler B, Reichard O, Uhnoo I, Weiland O. Swedish National Expert Panel for the treatment of chronic hepatitis C. Chronic hepatitis C: updated Swedish consensus. Scand J Infect Dis 2003; 35(8): 445-51.
- Raison CL, Broadwell SD, Borisov AS, Manatunga AK, Capuron L, Woolwine BJ, Jacobson IM, Nemeroff CB, Miller AH. Depressive symptoms and viral clearance in patients receiving interferon-alpha and ribavirin for hepatitis C. *Brain Behav Immun* 2005; 19(1): 23-7.
- Dalgard O. Follow-up studies of treatment for hepatitis C virus infection among injection drug users. Clin Infect Dis 2005; 40(Suppl.5): S336-8.

- Dalgard O, Bjoro K, Hellum K, Myrvang B, Skaug K, Gutigard B, Bell H; Construct Group. Treatment of chronic hepatitis C in injecting drug users: 5 years' follow-up. *Eur Addict Res* 2002; 8(1): 45-9.
- Backmund M, Meyer K, Von Zielonka M, Eichenlaub D. Treatment of hepatitis C infection in injection drug users. *Hepatology* 2001; 34(1): 188-93.
- Backmund M, Reimer J, Meyer K, Gerlach JT, Zachoval R. Hepatitis C virus infection and injection drug users: prevention, risk factors, and treatment. *Clin Infect Dis* 2005; 40(Suppl.5): S330-5.
- Backmund M, Meyer K, Edlin BR. Infrequent reinfection after successful treatment for hepatitis C virus infection in injection drug users. Clin Infect Dis 2004; 39(10): 1540-3. Epub 2004 Oct 26.
- Van Beek I, Buckley R, Stewart M, MacDonald M, Kaldor J. Risk factors for hepatitis C virus infection among injecting drug users in Sydney. *Genitourin Med* 1994; 70(5): 321-4.
- 17. Fischer B, Haydon E, Rehm J, Krajden M, Reimer J. Injection drug use and the hepatitis C virus: considerations for a targeted treatment approach-the case study of Canada. *J Urban Health* 2004; 81(3): 428-47.

