



HEPATITIS C, ACUTE

CRUDE DATA	
Number of Cases	2
Annual Incidence	
LA County	-- ^a
California	N/A
United States	N/A
Case Fatality	
LA County	N/A
United States	N/A

^a Rates based on fewer than 20 cases are unreliable.

DESCRIPTION

The Hepatitis C virus (HCV) is the most common bloodborne infection in the US. This RNA virus is one of at least 5 different viruses associated with liver disease and is predominantly transmitted through contact with contaminated blood and blood products. Sexual and perinatal transmission of HCV appears to occur less frequently, but its epidemiology has yet to be fully elucidated. People at risk include: anyone who has had a blood transfusion prior to 1989, IV drug users, hemodialysis patients, infants born to infected mothers, those with multiple sexual partners, health care workers who suffer needle-stick accidents and people with tattoos or body-piercings. However, an estimated 30% have no identifiable history of exposure to the virus. Household or familial contact is not considered a risk factor for the transmission of hepatitis C. There is no vaccine available for HCV and vaccines for hepatitis A and B do not provide immunity.

Symptoms of acute infections can include jaundice, fatigue, anorexia, nausea, or vomiting; however, up to 85% of acute infections have mild or no symptoms and usually go undetected. Hepatitis C completely resolves in only 15% of infections and progresses to a chronic illness in 60–70%. Medical complications occur decades after initial infection including cirrhosis, liver failure, and hepatic cancer. Once infection has occurred, secondary prevention recommendations include: vaccination for hepatitis A and B viruses, abstaining from alcoholic beverages, avoiding other high-risk behaviors (e.g., unprotected sex) and maintaining regular doctors visits for assessment and early treatment.

In the US, the annual number of acute hepatitis C virus infections has declined during the past decade from 180,000 to 35,000. Primary prevention efforts concentrate mainly on risk-behavior modification—specifically, avoiding contact with contaminated blood. An estimated 3.9 million Americans are currently infected with HCV, and an estimated 8,000–10,000 deaths each year result from HCV-associated chronic liver disease. HCV infection affects persons of all ages, but most acute cases of hepatitis C and the highest seroprevalence of HCV infection are found among young, male adults. The highest proportion both of incident cases and of prevalent infections is among White males.

The current CDC definition for acute hepatitis C requires that a person have evidence of jaundice or an onset date of symptoms within six months of diagnosis and have the following laboratory results:

1. A positive HCV test (antibody test/EIA) confirmed by a more specific test (RIBA or detection of the HCV-RNA antigen by polymerase-chain reaction) or an EIA signal to cutoff ratio of ≥ 3.8 .
2. Serum alanine aminotransferase (ALT) greater than 7 times the upper limit of normal.
3. No evidence of either acute hepatitis A or B disease.



DISEASE ABSTRACT

- There were 13 reported cases of acute hepatitis C in 2002, but upon further investigation only two cases were confirmed and met the current case definition.
- The two acute cases were in a 29 year-old Latino and a 51 year-old Asian. The first case had been incarcerated and the second case reported tattooing in the six months prior to infection. These were the only identified risk factors. No common surgical procedure or interventions were identified prior to clinical presentation. Both denied use of needles for injection of street drugs.
- A total of 9,691 HCV chronic cases were reported in 2002, 15% fewer than 2001 (N=11,379).

PREVENTION

Universal blood product screening in 1990 and heat-inactivation of other blood concentrates initiated in 1987 have dramatically reduced recipient-associated cases of hepatitis C. This leaves the reduction of high-risk behaviors as the primary recommendation for preventing transmission. Educational efforts aimed at reducing high-risk behaviors (e.g., sharing injection drug equipment, engaging in unprotected sex), may help to reduce new hepatitis C cases. Testing should be offered routinely to persons most likely to be infected with HCV who might require medical management, and testing should be accompanied by appropriate counseling and medical follow-up. Once chronic infection has occurred, consuming alcohol and becoming co-infected with HIV or other hepatitis A or B viruses can accelerate the progression of hepatitis C disease to cirrhosis, liver failure, and hepatocellular carcinoma. Additional funding is necessary to study the feasibility of hepatitis B vaccine into existing programs that provide drug/alcohol treatment as well as HIV screening and treatment.

COMMENTS

Conducting surveillance for acute hepatitis C is difficult—stringent criteria are established by the CDC and are required for diagnosis. With more widespread use of HCV testing, increasingly larger numbers of persons with a positive anti-HCV (antibody to HCV) test are being reported to state and local health departments. Most of these reports represent chronic disease from past drug use or blood transfusions. Because there is no serologic marker for acute hepatitis C, additional investigation is required to determine if these reports represent acute infection, chronic infection, a duplicate report (i.e., resulting from a repeated test of a person previously reported), or a false-positive.

Such stringent criteria explain why it is hard to classify the reported HCV cases—most of the anti-HCV reports are not accompanied by results of the other laboratory tests and resources are not available to conduct a follow-up on every reported case. Only cases reported with additional laboratory information are investigated; therefore, the number of acute hepatitis C cases is an underestimation of the total number of cases. Furthermore, there has been a recent change in the ALT levels necessary to be considered a case. Since 2000, the serum ALT levels have been raised from 2.5 times the upper limit of normal (ALT >120U/L) to 7 times the upper limit of normal (ALT >280 U/L). This standard has decreased the number of cases. ACDC is currently exploring methods to improve surveillance for hepatitis C in order to identify more acute cases and better understand the epidemiology of acute hepatitis C in LAC.

Therapy for hepatitis C is a rapidly changing area of clinical practice. Combination therapy with interferon and ribavirin is now FDA-approved treatment for chronic hepatitis. These recombinant interferon drugs have been effective in 40%–50% of those treated. Side effects include: flu-like symptoms, depression, headache and decreased appetite and are usually very severe. No data exist indicating that treatment begun during the acute phase of infection is more effective than treatment begun early during the course of chronic HCV infection.

The most important areas for future research include developing less toxic treatments and finding better ways to identify those who are infected. New studies, including evaluations of the latest combination treatment in patients who haven't responded to other treatments or who had to stop those treatments due to side effects, still need to be conducted.



ADDITIONAL RESOURCES

Further information about hepatitis is available from:

American Liver Foundation www.liverfoundation.org

International Liver Foundation www.hepfi.org/infomenu.htm

CDC www.cdc.gov/ncidod/diseases/hepatitis/