Chronic Viral Hepatitis

The unrelated types of viral hepatitis were historically confused due to similar presentation of acute systemic illness with jaundice, but they eventually became recognized as distinct entities with differing public health interventions. As acute hepatitis rates fall, chronic hepatitis is increasingly of public health importance.

Acute Viral Hepatitis

Although many viruses can cause acute hepatitis, the major etiologies were unimaginatively labeled. Hepatitis A virus is transmitted by the fecal-oral route and does not result in a chronic infection. Transmission of hepatitis B virus is sexual and bloodborne, with the additional risk for perinatal infection. Hepatitis C virus is mainly bloodborne, with lower rates of sexual and perinatal transmission. Hepatitis D occurs as a rare co-infection with hepatitis B. Hepatitis E resembles hepatitis A in illness and transmission, occurring mainly as rare infections in U.S. residents after travel overseas.

Acute viral hepatitis decreased markedly in Washington State over recent decades. Acute hepatitis B cases peaked at 1126 cases (25.1 cases per 100,000 population) in 1987 and fell to 35 in 2011. Acute hepatitis C cases peaked at 232 cases (5.1/100,000) in 1988 and were stable in Washington at around 23 cases reported annually during 2002–2010 but reports increased to 41 in 2011 and to 18 in the first six months of 2012.

Chronic Viral Hepatitis in Washington State

Chronic hepatitis B infection results for about 5% of cases acutely infected as adults but around 90% of infants infected perinatally. In this country,
chronic hepatitis B occurs most commonly in immigrants from some Asian countries and their children, in persons who ever shared intravenous drug equipment, and in those with many sexual contacts. During 2009-2011, the Washington State Department of Health (DOH) annually received reports of around 1,200 newly diagnosed cases of chronic hepatitis B (18 per 100,000). Of these cases, 67% are age 25-54 years and about 5% are age less than 21 years. For the 30% of reports with known race, about 58% are Asian and 14% are Black, both highly disproportionate compared to the state’s population distribution. The age-adjusted death rate from hepatitis B is relatively steady, about 0.9 deaths per 100,000.

Chronic hepatitis C infection results in up to 85% of acute infections. Chronic hepatitis C occurs mainly in persons who ever shared intravenous drug equipment. During 2009–2011, DOH annually received around 5,500 newly diagnosed cases of chronic hepatitis C (82 cases per 100,000); about 7% are from the Department of Corrections. Of these cases, 89% are age 35-64 years and about 2% are age less than 21 years. Of the 26% of cases with known race, about 6% are Black, also highly disproportionate compared to the state’s population. The age-adjusted death rate for chronic hepatitis C increased from 0.5 deaths per 100,000 in 1991, surpassed the rate for HIV-related deaths in 1998, and reached over 7 deaths per 100,000 in 2009.

Patients with chronic viral hepatitis should be counseled regarding avoiding alcohol use; evaluated for vaccination against hepatitis A (and, if applicable, hepatitis B); and assessed for chronic liver disease including the severity and stability of involvement. As a rising cause of morbidity and mortality in this country, chronic hepatitis C has been
increasingly targeted for screening to identify chronic infections followed by evaluation of newly identified cases for antiviral treatment. Centers for Disease Control and Prevention (CDC) developed an individual risk assessment for chronic viral hepatitis to encourage screening.

**Public Health Interventions for Viral Hepatitis**

Only a fraction of actual acute viral hepatitis cases are detected; subclinical illness occurs commonly for both hepatitis B and C virus infections so many persons do not realize they have been infected. Those progressing to chronic hepatitis B or C infection may not know they have a disease that carries the risk of cirrhosis and liver cancer, as well as the potential for transmission to others.

Screening for chronic hepatitis can identify persons unaware of their infections. Routine testing is recommended for all persons with a risk for chronic hepatitis infection, including:

- Injection drug use, including only once many years ago
- Long-term hemodialysis treatment
- Known hepatitis-positive exposure such as needlestick or transplanted organ
- HIV infection
- Signs or symptoms of liver disease (e.g., abnormal liver enzyme tests)
- Born to woman with either known infection or from geographic region with high prevalence (particularly hepatitis B)
- Household or sexual contact of person with chronic infection (particularly hepatitis B)
- Multiple sexual contacts (particularly hepatitis B)
- Clotting factor concentrates made before 1987 (particularly hepatitis C)
- Blood transfusions or solid organ transplants before July 1992 (particularly hepatitis C)

Repeated prevalence studies by National Health and Nutrition Examination Survey identified a specific risk for chronic hepatitis C among baby boomers, who account for 76.5% of the total
chronic hepatitis C prevalence. An analysis that focused on people with health care who would be identified by testing found that birth cohort screening was cost effective. Based on these data, in August of this year, CDC issued recommendations for one-time hepatitis C screening of all persons born from 1945 through 1965 without previous ascertainment. Subsequent medical evaluation can identify which persons with chronic hepatitis are appropriate for treatment.

Public health interventions can be directed towards reducing the impacts of chronic hepatitis. To prevent hepatitis B, universal vaccination is recommended for all children, and additional treatment for infants born to a woman with known hepatitis B infection. Those at increased risk of any chronic hepatitis, such as having multiple sexual partners within six months, men who have sex with men, intravenous drug users, healthcare workers, and residents and staff of facilities for developmentally disabled person, should receive hepatitis B vaccine if susceptible. There has been a recent increase in acute hepatitis C particularly among intravenous drug users in Washington, making this group a high priority for hepatitis A and B vaccines to prevent additional infections and damage to the liver. Awareness of a chronic infection is essential for a person to seek appropriate evaluation and treatment as well as being counseled to prevent additional acute and chronic cases.

Resources:


Hepatitis risk assessment resources are available at: [http://www.cdc.gov/hepatitis/RiskAssessment/HRAResources.htm](http://www.cdc.gov/hepatitis/RiskAssessment/HRAResources.htm)