Causes, Types, Symptoms, Diagnosis and Prevention of Hepatitis

(1)Hepatitis, an inflammation of the liver, usually is caused by viruses (Table below). It also can be caused by an amoeba and various toxic chemicals. The most common viral hepatitis is hepatitis A, formerly called infectious hepatitis. It is caused by the hepatitis A virus (HAV), a single-stranded RNA virus usually transmitted by the fecal-oral route. Hepatitis B, formerly called serum hepatitis, is caused by the hepatitis B virus (HBV), a double-stranded DNA virus usually transmitted via blood.

(2)A third type of hepatitis is transmitted parenterally (by blood) and is probably caused by at least two viral agents. This type is diagnosed in the absence of HAV and HBV as hepatitis C (HCV), formerly called non-A, non-B (NANB) hepatitis (Figure below).

Figure: Hepatitis. Reported cases by year—U.S., 1980–2005. (next page)

(3)**A fourth type** of hepatitis, transmitted by the fecal-oral route and formerly called non-A, non-B, non-C hepatitis, has been separated out as hepatitis E (HEV). An especially severe form of the disease hepatitis D, or delta hepatitis, is caused by the presence of both hepatitis D virus (HDV) and HBV. However, HDV alone does not cause disease; it cannot infect without HBV. Hepatitis A.

(4)Hepatitis A occurs most often in children and young adults, especially in autumn and winter. It can occur in epidemics if a population is subjected to water or food, especially shellfish, contaminated with HAV. There are no animal reservoirs. Outbreaks due to contaminated food in fast-food restaurants have been on the rise. Hepatitis A has an incubation period of 15 to 40 days and begins as an acute febrile illness. After entering the body through the mouth, the viruses (an RNA picornavirus) replicate in the gastrointestinal tract and spread through the blood to the liver, spleen, and kidneys.

(5)Jaundice, a yellowing of the skin common in hepatitis, is caused by impaired liver function. The liver fails to rid the body of a yellow substance called bilirubin, which is a product of the breakdown of hemoglobin from red blood cells. Other symptoms of hepatitis are malaise (a general feeling of discomfort, illness, or unease whose exact cause is difficult to identify), nausea, diarrhea, abdominal pain, and lack of appetite for a period of 2 days to 3 weeks. Probably over half the cases are asymptomatic. Chronic infections are rare, and recovery usually is complete and confers lifelong immunity.

(6)Immunological tests are available to detect hepatitis A viruses and host antibodies against them. There is no treatment for hepatitis other than alleviating symptoms. A vaccine for hepatitis A has been available since 1995. Gamma globulin injections are also used to provide temporary immunity. While hepatitis A has declined in all parts of the U.S., some areas retain high incidence.

Hepatitis B

Hepatitis B occurs in people of all ages with about the same incidence throughout the year. It can be transmitted by intravenous or percutaneous (into the skin) injections, by anal/oral sexual practices (common among homosexual males), by contact with other virus-containing body secretions (including semen and breast milk), and by contaminated needles among intravenous drug users. Health care workers who have routine contact with patients' body fluids (especially blood) have a higher incidence of the disease than does the general community. Transmission via contaminated semen in artificial insemination has been documented. Hepatitis B has an incubation period of 45 to 180 days, with an average of 90 days. The virus replicates in cells of the liver, lymphoid tissues, and blood-forming tissues. It can persist in the blood for years, thus creating a carrier state. The onset of symptoms is insidious, and fever is uncommon. Otherwise the symptoms are similar to those of hepatitis A, except that chronic, active hepatitis B frequently destroys liver cells. Immunological methods are available to detect hepatitis B virus and the host's antibodies. Treatment relieves some