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Hepatitis A Virus Infection

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Hepatitis A virus (HAV) is a major cause of waterborne hepatitis worldwide especially in tropical and subtropical regions (1, 2). HAV is found in the stool of the patients contaminated with hepatitis A virus and is usually transmitted from person to person through HAV contaminated water and foodstuff (1-4). Therefore, HAV can spread under bad sanitary conditions and also when there is no good personal hygiene (2-4). This virus can be deactivated by heating at 85°C for one minute. Adequate and suitable chlorination of water can remove hepatitis A virus. If people are going to travel to an endemic area, they should peel and wash all fresh fruits, wash and disinfect vegetables, avoid raw or undercooked meat and even fish and drink bottled or boiled water (2-5). The risk factors for HAV infection are as follows:

1, Travelling to endemic areas where HAV infection is common and there is no clean water and proper sewage disposal system; 2, being a housemate or having intercourse with someone who is infected with HAV; 3, children and personnel of pediatric health care centers facing a patient or colleague with HAV infection; 4, personnel and residents of institutions for disabled children facing a resident or colleague with HAV infection.

Three of every four individuals infected with HAV are symptomatic. Patients usually develop nausea, vomiting, loss of appetite, abdominal pain, sometimes fever, tiredness, dark urine, and yellow skin and eyeballs similar to other viral hepatitis especially hepatitis E virus (HEV) infection. Adults often have more symptoms than children (2-4, 6, 7). Specific antibody for HAV confirms HAV infection. Anti-HAV (IgM) appears at the onset of symptoms and remains high for one to two months and then usually disappears within four to six months after the acute phase. Anti-HAV immunoglobulin G (IgG) is detectable shortly after appearance of IgM titer and usually increases when the IgM level decreases. IgG persists for lifelong and provides immunity against reinfection of HAV (1, 2, 6-8). There is no specific treatment for HAV infection, although the prognosis is excellent. Chronic hepatitis does not usually occur and there is no lasting sequela. Death is rare, but it can happen in the elderly patients and those with underlying liver disease (people with hepatitis C virus and immunodeficiency) due to acute liver failure (1-3). Although, death from fulminant HAV is reported in all age groups, mortality rate is 0.3% to 1.8% among adults older than 50 years and is also higher in persons with chronic liver diseases. However, immunoglobulin is used as temporary protection against this disease for close contact in persons with HIV/AIDS, pregnant women, nursing mothers and immunocompromised persons. Immunoglobulin is used to prevent hepatitis A infection both before and within two weeks after exposure to HAV (1-3, 6, 8). Practicing good personal hygiene and washing hands after each toilet and before handling or eating food are the best routes to prevent this infection. Travellers to endemic areas should take immunoglobulin just before traveling. If they live for a long time in a country where HAV is very common, they should take an increased dose of immunoglobulin every five months to have protection against HAV (1-3, 6-8). A vaccine for long-term protection against HAV is being developed and should be performed in high risk groups. The hepatitis A vaccine is given in two doses: initial vaccination followed by a booster at six months later (1-3).

The center for disease control and prevention (CDC) recommends the following groups for hepatitis A vaccination:

1, People who are planning to travel to areas with high rates of HAV infection; 2, all children at one-year-old or older who vaccinated late; 3, injection drug users; 4, laboratory staff who may face HAV; 5, people with chronic liver diseases, especially those with HCV infection; 6, people who treat with clotting-factor concentrates.

Finally, it should be considered that sanitation is the most important way to prevent HAV like HEV. It is necessary to use standard routes for public water supplies and also preparation of food and improved personal hygiene.

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Footnotes

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