HEPATITIS A IMMUNISATION

Hepatitis A is a viral infection of the liver which may cause symptoms of malaise, aches and pains, fever, nausea, anorexia, abdominal discomfort and darkening of the urine, followed within a few days by jaundice. Most cases are mild or anicteric with asymptomatic disease common in children.

The incubation period is usually four weeks, with a range of two-seven weeks. The illness usually lasts from one to three weeks and is followed by complete recovery. People are usually infectious from two weeks before the development of symptoms until one week after the appearance of jaundice – a period of about three-four weeks. The peak in viral shedding occurs immediately before jaundice.

Very large amounts of the hepatitis A virus (HAV) are found in faeces during the infectious period and the disease is endemic in countries where sanitation is poor and the virus contaminates water and food.

The HAV may be spread to household contacts if foodstuffs or eating utensils are handled by infected individuals. Contact with faeces and oral/anal sex also transmit the virus. Generally, young children and developmentally disabled individuals are much more likely than adults to transmit the virus within the household, day care centre or residential institution.

Travel to countries where the disease is endemic is an important risk factor and homosexual sexual practices have been associated with recent outbreaks of hepatitis A.

HEPATITIS A VACCINE

A formaldehyde-inactivated vaccine is prepared from the HM 175 strain of hepatitis A virus grown in human diploid cells. It is not a blood-derived product.

INDICATIONS

Hepatitis A vaccine is indicated for active immunisation against HAV in susceptible people older than five years and at risk of exposure. No paediatric dose is yet available.

Primary immunisation course

Two 1 mL doses of vaccine given two-four weeks apart. The vaccine is given by intramuscular (IM) injection in the deltoid region.

The antibody response may be impaired in people whose immune system is compromised, such as HIV positive individuals.

Booster doses

Antibodies produced in response to the primary immunisation course last for at least 12 months. A booster dose between six and 12 months after the primary course results in more persistent antibodies. The duration of antibody persistence following the booster dose is unknown.

ANTIBODY TESTS

Pre-immunisation testing

HAV infection induces lifelong immunity. Immunisation of people who have antibodies to HAV from prior infection is not necessary but will not cause adverse effects.

Testing for anti-HAV IgG before immunisation may be worthwhile for those born in developed countries before 1945, for people born or raised in areas of high or moderate hepatitis A endemicity, or for those who have a history of jaundice.

Post-immunisation testing

Due to the high immunogenicity (about 100 per cent) observed with inactivated hepatitis A vaccines, post-immunisation testing for serologic response is not indicated.

RECOMMENDATIONS FOR USE OF HEPATITIS A VACCINE

Recommendations on the use of hepatitis A vaccine in outbreaks or contacts of cases cannot be made as data are not yet available on its effectiveness, alone or in combination with IG.

Travellers

People who travel to areas of high or moderate hepatitis A endemicity are at risk of acquiring hepatitis A. In general, travellers to the USA, Canada, Western Europe, Japan and New Zealand do not have a significantly increased risk of hepatitis A infection, and therefore IG prophylaxis or immunisation is not warranted.

Travellers to other areas should receive hepatitis A vaccine before departure especially for travel of longer than three months, and for those who travel repeatedly.

Travellers for whom hepatitis A vaccine is indicated and who present for immunisation less than two weeks before departure may be given a single dose of vaccine plus normal (human) immunoglobulin (IG), and should complete the course of immunisation on their return.

People with chronic liver disease

Since clinical hepatitis A may be more severe in persons with chronic liver disease due to hepatitis viruses or other aetiologies, use of hepatitis A vaccine in these persons may be considered.

Side effects

The side effects are usually mild and confined to the first few days after immunisation. Common side effects are soreness, redness and induration at the injection site. Less common side effects are fever, malaise, fatigue, headache, nausea and loss of appetite.

Precautions and contraindications

Immunisation should be postponed in people with severe febrile infections.

Use in pregnancy

The effect of hepatitis A vaccine on foetal development has not been assessed. Since it is an inactivated vaccine, the risk to the foetus is likely to be negligible, but it should not be given unless there is a definite risk of infection.

Use in lactation

The effect on breast-fed infants of the administration of hepatitis A vaccine to their mothers has not been evaluated. Hepatitis A vaccine should be used with caution in breast-feeding women.

Use with normal (human) immunoglobulin (IG)

The concomitant administration of IG with the first dose of hepatitis A vaccine does not affect the seroconversion rate. However, this may result in a lower anti-HAV antibody titre than if hepatitis A vaccine is given alone and may affect the duration of protection.