

HEPATITIS A

What's New – July 2007 Update

- The Committee now recommends that clinicians vaccinate all HIV-infected patients who are negative for HAV IgG (2006 version recommended that clinicians offer the hepatitis A vaccine to patients who are at increased risk for hepatitis A).
- New recommendation to obtain a post-vaccination antibody measurement in patients who are at increased risk for hepatitis A infection to verify vaccine efficacy and to identify patients who might benefit from vaccine boosting. Persons who are at increased risk are listed in Table 1.

A. Introduction

Hepatitis A virus (HAV) causes approximately 45% of the cases of viral hepatitis annually in the United States. The modes of transmission are ingestion of contaminated water and food, such as raw clams or oysters; oral-anal contact; person-to-person spread via fomites, such as shared utensils or bath towels; or, very rarely, blood or blood product transfusion. Approximately 40% of cases are in individuals who have had known contact with a person with HAV; 10% of cases are related to food and/or waterborne disease outbreaks or international travel; and 50% of cases have no identified source. Men who have sex with men (MSM) are at increased risk for HAV infection, and studies show that the majority of MSM in the United States have not received the hepatitis A vaccine.^{1,2}

Key Point:

Currently, no specific treatment is available for HAV, although infection can be prevented by both pre-exposure vaccination and post-exposure serum immune globulin administration.

Severity of Disease

The incubation period of HAV infection averages 28 days (range, 15-50 days). Although HAV does not cause chronic hepatitis, it is not a benign disease; the morbidity in adults is substantial. Young children tend to have asymptomatic or minimally symptomatic disease, whereas older children and adults have more severe illness, with jaundice occurring in approximately 70% of cases.³ Adults with acute HAV lose an average of 30 workdays,⁴ and approximately 30% of symptomatic patients require hospitalization.⁵ The overall case fatality rate is low (0.3%) but increases to 2% in individuals >40 years of age.⁶

HIV/HAV Coinfection

HAV does not seem to cause more severe clinical illness in HIV-infected individuals; however, acute HAV may require temporary interruption of ARV therapy, which has potential long-term consequences. One study of 35 HIV-infected patients who developed acute HAV found that most patients had to discontinue ARV therapy for an average of 2 months.⁷ Once ARV therapy was reinstated, viral suppression to <400 copies/mL was achieved in significantly fewer persons compared with those who did not require interruption of therapy. Another study found that HIV-

infected patients had a significantly higher HAV viral load and a significantly prolonged duration of HAV viremia with possible viral shedding, compared with non-HIV-infected individuals.⁸ This would likely result in a prolonged duration of HAV transmission in a community.

B. Prevention of HAV Infection

1. Pre-Exposure Vaccination

RECOMMENDATIONS:

Clinicians should administer the HAV vaccine to HIV-infected patients who are negative for HAV IgG. The full series, consisting of an initial dose and a second dose 6 to 12 months later, should be given to ensure maximal antibody response.

Clinicians should administer HAV vaccination early in the course of HIV infection. If a patient's CD4 count is <300 cells/mm³ or the patient has symptomatic HIV disease, it is preferable to defer vaccination until several months after initiation of ARV therapy in an attempt to maximize the antibody response to the vaccine.

Clinicians should obtain a post-vaccination antibody measurement in patients who are at increased risk for hepatitis A infection (see Table 1).

TABLE 1 PERSONS WHO ARE AT INCREASED RISK FOR HEPATITIS A INFECTION
<ul style="list-style-type: none">• MSM• Travelers to countries with high endemicity of infection• Persons who live in a community experiencing an outbreak of HAV infection• Illicit drug users, particularly injection drug users• Persons who have clotting-factor disorders• Persons at occupational risk for infection• Persons with chronic liver disease (e.g., hepatitis B or C)*

* Persons with chronic liver disease are at increased risk for severe infection if they become coinfecting with hepatitis A.

Infection with HAV can be prevented by active immunization prior to exposure with either of the two currently licensed vaccines, which are considered equivalent in efficacy. HAV vaccines are highly immunogenic in immunocompetent adults (>95% seroconversion); however, the seroconversion rates and the geometric mean serum antibodies in HIV-infected individuals are lower than in non-HIV-infected populations. Response rates have generally ranged from 50% to 95%.⁹⁻¹³ HAV vaccine appears to have no effect on the course of HIV infection or on plasma HIV viral load. A combined hepatitis A and B vaccine is also available and can be used in persons susceptible to both hepatitis A and B. It is given in three total doses at 0, 1, and 6 months.

Administration of HAV vaccine is preferred when CD4 counts are >300 cells/mm³ to maximize response to the vaccine. An effective antibody response may not occur in up to 15% of patients with CD4 counts <300 cells/mm³.¹¹ Follow-up HAV antibody testing should be obtained in patients who are at increased risk for hepatitis A infection to verify vaccine efficacy and to

identify patients who might benefit from vaccine boosting. Some clinicians would obtain post-vaccination antibody measurements in all HIV-infected patients. Documentation of HAV susceptibility in the patient's medical record facilitates targeted counseling for patients who are at increased risk for HAV (see Table 1).

2. Post-Exposure Immune Globulin

RECOMMENDATION:

Clinicians should administer immune globulin (0.02 mL/kg IM) as HAV post-exposure prophylaxis to non-immune or non-vaccinated patients within 2 weeks of a potential HAV exposure. HAV vaccine is not indicated for post-exposure prophylaxis; however, it should be administered concurrently with serum immune globulin for the long-term prophylaxis of an at-risk individual.

Serum immune globulin can be given to individuals who are not immune to HAV within 2 weeks after an exposure to an HAV household contact, sexual partner, or common source exposure. A single intramuscular dose of 0.02 mL/kg is effective in preventing infection or attenuating HAV infection that might result from such an exposure.

References

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Further Reading

Centers for Disease Control and Prevention. Prevention of hepatitis A through active or passive immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Morb Mortal Wkly Rep* 2006;55(No. RR-7):1-23.

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