## Hepatitis A

(also known as “HA”, “Type A hepatitis”, “infectious hepatitis”, “epidemic hepatitis”, “epidemic jaundice”, and “catarrhal jaundice”; caused by hepatitis A virus – HAV)

Viral hepatitis E (HE) is similar to hepatitis A (similar clinical course, with fecal-oral transmission).

### Is the initiation of non-invasive dental hygiene procedures* contra-indicated? Yes, if the patient/client has active hepatitis or is potentially infectious.

- **Is medical consult advised?** ............................................. Yes, if patient/client is not receiving ongoing medical care/monitoring or has significant morbidity.
- **Is medical clearance required?** ........................................ Yes, if active hepatitis or prolonged bleeding time or severe liver disease is suspected on the basis of history and/or examination.
- **Is antibiotic prophylaxis required?** ................................. No. However, patients/clients with severe liver disease may be more susceptible to dental infection; selection of antibiotic should be based on risk and severity of infection.
- **Is postponing treatment advised?** ................................. Yes, if the patient/client has active hepatitis, is potentially infectious, or is not receiving ongoing medical care/monitoring for severe liver disease, or if prolonged bleeding time is suspected. See “medical consult” above.

### Oral management implications

- **Mode of transmission:** Person-to-person via fecal-oral route (via food/water contamination or household contact or oral-anal sexual contact; virus is found in the feces) or, less commonly, via injecting and non-injecting drug use or, rarely, via blood transfusion/blood products obtained from viraemic donors during the incubation period. Maximum communicability occurs during the latter half of the incubation period (average 28±30 days; range 15±50 days) and continues for a few days after the onset of jaundice (or during peak liver enzyme activity in non-jaundice cases). Most persons are probably non-infectious after the first week of jaundice, although prolonged fecal excretion of HAV (up to 6 months) has been documented in children. There is no chronic carrier state in HA.
- **If you, the dental hygienist, contract hepatitis A, you should avoid patient/client contact, contact with patient/client environment, and food handling until 7 days after the onset of jaundice.
- **Hepatitis A** can be prevented by immunization. The National Advisory Committee on Immunization (NACI) recommends a targeted approach to HA immunization, which includes people with chronic liver disease (such as hepatitis B or hepatitis C), men who have sex with men, people who use illicit drugs, and travellers to highly endemic countries. Ontario’s publicly funded immunization program does not cover hepatitis A immunization. While the primary mode of HAV transmission is fecal-oral rather than blood-borne, dental hygienists/hygiene students may wish to consider immunization against hepatitis A if no confirmed history of HAV infection or if anti-HAV (HA antibody) negative on blood testing. Hepatitis A-only vaccines, as well as combination hepatitis A/B vaccines, are available. Long-term protection is conferred after two doses of HA vaccine.
- **Hepatitis A** vaccine is most effective in preventing illness post-exposure if used within 14 days of exposure, particularly if used in conjunction with passive immunization with immune globulin (IG). It is recommended for certain susceptible contacts following potential exposure to HAV.

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Oral management implications (cont’d)

- Little risk exists for transmission of HAV and HEV from occupational exposure of dental hygienists to patients/clients infected with these viruses. Certain drugs requiring or affecting liver metabolism may need to be avoided or reduced in dosage in patients/clients with liver disease (e.g., acetaminophen, aspirin, ibuprofen, codeine, local anaesthetics, and some antibiotics).
- Excessive bleeding (due to reductions in coagulation factors and platelets) may occur in patient/clients with end-stage liver disease (e.g., resulting from fulminant hepatitis A superimposed on chronic liver disease); these persons may need vitamin K and/or platelet or clotting factor replacement for certain oral procedures.
- Portal hypertension¹ in patients/clients with end-stage liver disease may result in low systolic blood pressure; therefore blood pressure should be monitored in such persons.
- In Ontario, hepatitis A is a specified Reportable Communicable Disease (as per Ontario Regs 559/91 and amendments under the Health Protection and Promotion Act). Thus, physicians and laboratories are obligated to report this disease to the local Medical Officer of Health so the local public health unit can ensure affected persons are appropriately managed and further disease transmission is minimized.
- To reduce oral acquisition and spread of viral hepatitis A (and other sexually transmitted illnesses), condoms or dental dams should be used for all oral-anal contact.

Oral manifestations

- The oral mucosa may have a yellow-brown cast during the icteric (jaundice) phase of acute hepatitis, and dysgeusia (altered, usually unpleasant, taste) may also occur.
- Abnormal bleeding can result from significant liver damage.

Related signs and symptoms

- Viral hepatitis is inflammation of the liver resulting from certain viral infections, including fecal-orally transmitted HAV and HEV. (Hepatitis may also result from chemical agents, such as alcohol and certain drugs.)
- Since the introduction of HA vaccine in Canada (in 1996), the incidence of HA has declined substantially. The number of cases of hepatitis A reported in 2008 was 298, with the actual number of cases estimated to be about seven times higher given under-diagnosis, under-reporting, and subclinical infections. Regions of the world with higher levels of endemicity and risk of HA transmission include much of Asia, Africa, Latin America, and Oceania.
- Following the incubation period, the clinical course of acute viral hepatitis A manifests variably (and in adults usually abruptly) in the prodromal (pre-icteric/pre-jaundice) phase as malaise, fatigue, weakness, decreased appetite, nausea, vomiting, right upper quadrant (liver) abdominal discomfort, and fever. A few days to 2 weeks later, the icteric phase is heralded by the onset of jaundice (yellow-brown discoloration resulting from bilirubin accumulation) of the conjunctivae and skin (and oral mucosa). Dark urine may also occur, and stool colour may lighten, often in association with pruritus (itchiness). In severe cases, enlargement of the liver and spleen may occur. During the convalescent or recovery (post-icteric) phase, symptoms disappear, but hepatomegaly (liver enlargement) and abnormal liver function values may persist for a variable period.

¹ Portal hypertension is an increase in the blood pressure of the portal venous system. Veins coming from the stomach, intestine, spleen, and pancreas merge into the portal vein, which then branches as it travels through the liver. If the branching vessels are blocked due to liver damage, blood cannot flow properly through the liver. This results in increased pressure in the portal vein, which may lead to the development of varices (large, swollen veins) within the esophagus, stomach, rectum, or umbilical area. Varices can rupture, resulting in potentially life-threatening complications.
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Related signs and symptoms

- In 10% to 20% of patients/clients with acute hepatitis, a serum sickness-like syndrome (variably involving rash, hives, arthralgias, and fever) occurs during the preicteric phase.
- HA varies in clinical severity from a mild illness lasting 1 to 2 weeks to a severely disabling disease lasting several months. Prolonged, relapsing hepatitis for up to 1 year occurs in 15% of cases.
- About 10% of infected persons may have no signs/symptoms at all. This is more commonly the case in children, whereas most adults tend to be symptomatic. About 70% of persons contracting HAV become jaundiced to some degree.
- While hepatitis A follows a relatively benign, self-limited course in many persons, severe and fulminant acute hepatitis resulting in hepatic (liver) failure can occur, especially in elderly persons and in patients/clients with pre-existing chronic liver disease. Other complications of HA include cholestatic hepatitis (from decreased bile excretion) and extrahepatic manifestations (including encephalopathy and increased bleeding time). While case fatality is low in younger persons, it can reach nearly 2% in adults aged 50 years or more.
- Unlike hepatitis B and hepatitis C, HA does not lead to chronic infection, chronic hepatitis, or cirrhosis.

References and sources of more detailed information

- Middlesex-London Health Unit
  http://www.healthunit.com/sti-hepatitis
- Dentalcare.com continuing education course
- WebMD
- Canadian Immunization Guide (Public Health Agency of Canada)
  http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-hepa-eng.php#a1

* Includes oral hygiene instruction, fitting a mouth guard, taking an impression, etc.

** Ontario Regulation 501/07 made under the Dental Hygiene Act, 1991. Invasive dental hygiene procedures are scaling teeth and root planing, including curettage surrounding tissue.

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