Hepatitis A infection

Hepatitis A virus is a non-enveloped single-stranded RNA virus which is transmitted by the faeco-oral route. It is classified under the Hepatovirus genus of the Picornaviridae family.

It causes a viral hepatitis and is frequently seen in travellers to endemic areas and those engaging in higher-risk sexual activities.
The majority of adults infected experience symptoms (approximately 70–95%). Commonly a mild self-limiting illness manifesting with flu like symptoms, abdominal discomfort, and nausea.

Children under the age of 5 are frequently asymptomatic.

Risk factors

Though uncommon in the UK, there are a number of at risk groups.

Travel: those travelling to endemic areas

Sexual: high risk activities (e.g analingus, digital-rectal contact, chemsex), multiple partners

Haematological disorders: factor VIII and factor IX concentrates have been implicated in transmission

Occupational risks: for example laboratory or sewage workers

IVDU: known to be at increased risk.

Phases

Hepatitis A is said to follow four clinical phases (though significant variation exists).

Incubation: Hepatitis A as a relatively long incubation period that may last from 2 - 6 weeks (mean 28-30 days).

Prodromal: Early part of the disease, characterised by fever, joint pain and rash. Flu-like symptoms may be present

Icteric: In addition to jaundice, the icteric phase is characterised by anorexia, abdominal pain and change in bowel habit.

Convalescent: Recovery phase as the body returns to normal and symptoms subside. Symptoms like malaise may last months.

Clinical features

Hepatitis A tends to cause a mild illness characterised by a flu-like illness and GI upset.

Symptoms

Abdominal discomfort

Nausea

Anorexia

Diarrhoea

Flu-like illness

Pruritus

Dark urine, pale stool

Rash

Signs

Jaundice

RUQ tenderness

Hepatomegaly (85%)

Splenomegaly (15%)

Lymphadenopathy (5%)

Hepatitis A clinical features

Investigations

Hepatitis A IgM and Hepatitis A IgG antibodies (HAV-IgM, HAV-IgG) may be used to diagnose the infection.

Liver enzymes

ALT/AST: Tends to be significantly elevated, between 500 and 10,000 IU/L

Bilirubin: Tends to be moderately elevated, between 50 and 200 micromols/L

Prothrombin time: Tends to be normal, may be elevated in complicated disease

Serology: HAV-IgM is positive soon after symptoms develop and tends to remain detectable for a few months. HAV-IgG becomes positive 5-10 days after symptoms develop and remains lifelong.

+ve HAV-IgM, +ve HAV-IgG: Likely acute hepatitis A infection
+ve HAV-IgM, -ve HAV-IgG: May indicate acute infection or false positive IgM
-ve HAV-IgM, +ve HAV-IgG: Indicates previous infection or vaccine based immunity
-ve HAV-IgM, -ve HAV-IgG: No evidence of infection, may be very early or still in the incubation phase

Repeat serology may be sent if negative but the patient is in the first 7-10 days of symptomatic disease.

Graph showing the change in hepatitis A serology and serum ALT over time

Management

Management tends to be supportive except in the most severe cases.

The majority of patients do not need hospital admission. However any patient who is unwell or has significant liver impairment should be admitted and referred to hepatology.

Supportive

General points: the majority of patients simply require supportive care. Advise good oral hydration and rest. Alcohol should be avoided.
Nausea: metoclopramide (max. 5 days) or cyclizine can be given if there is no significant liver impairment. In the presence of liver impairment discuss with specialists.

Pruritus: chlorphenamine can be prescribed in the absence of liver impairment. In the presence of liver impairment discuss with specialists.
Reduce transmission: stay at home, good hygiene, avoid unnecessary contact and unprotected sex for 7 days after jaundice appears or symptoms began.

Pregnancy

The information on the impact of hepatitis A on pregnancy is limited. There is thought to be an increased risk of miscarriage or pre-term labour when it occurs in the second and third trimester.

Breastfeeding is not known to transmit the virus. Good personal hygiene is advised.

At risk contacts should be reviewed, if they have not been vaccinated, immunoglobulin should be considered. Typically the hepatitis vaccine will be offered.

Further care

Referral: Consider the need for a GUM clinic or drug rehabilitation services.

Follow up: Patients should be reviewed on a weekly basis for clinical review and repeat LFTs. Refer to specialist services if clinically worsening or worsening or persistently abnormal LFTs.

Vaccination

Hepatitis A vaccine is recommended to those at risk of infection and at risk of complications off infection.

Individuals who should be offered vaccination include:

Travel (to endemic areas)
Chronic liver disease
Sexual (MSM, high risk activities e.g analingus, digital-rectal contact, chemsex)
Occupational risks
IVDU
It is available as a monovalent vaccine or in combination with hepatitis B or typhoid. The contents of each vaccine and the patients allergy status must be checked.

The first dose should be given at least 2-3 weeks prior to travel. Extra doses may be recommended if long term protection is needed.

Complications

Rarely hepatitis A leads to more serious illness and complications needing specialist care.

Relapsing hepatitis (may occur in 5-15%)
Fulminant liver failure
Prolonged cholestasis
Others (interstitial nephritis, acute pancreatitis, red cell aplasia, Guillain-Barre syndrome)