

MEASLES

An acute & highly infectious, vaccine preventable disease of childhood. Commonly affecting at 6 months to 3 years of age. Presented with fever, cough, coryza, conjunctivitis, and maculopapular rash. Complications are pneumonia and diarrhoea. It is transmitted by coughing and sneezing (droplets, aerosols).

Sampling for lab diagnosis-

1 Throat swab- collected 0-3 days of rash onset.

2 Serum- 4-28 days of rash onset

RUBELLA

An acute but mild childhood infection, presented with mild fever, lymphadenopathy and maculopapular rash. Commonly affecting at age of 3-10 years. Infection in first trimester of pregnancy leads to foetal deaths or congenital defects (CRS), deafness, blindness due to cataract and cardiac malformation. Fortunately it is a VPD.

It is transmitted by coughing and sneezing (droplets, aerosols).

Sampling for lab diagnosis-

1 Throat swab- collected 0-3 days of rash onset.

2 Serum- 4-28 days of rash onset

DENGUE

It is an acute viral infection by dengue virus which has four subtypes-1, 2, 3 &4. Transmitted by tiger mosquito *Aedes aegypti*. Usually it is self limiting & asymptomatic but may lead to dengue fever (DF), Dengue hemorrhagic fever (DHF) with or without shock. It is presented by fever, headache, myalgia, arthralgia, retro-orbital pain, photophobia, anorexia, vomiting. In DHF petechiae, epistaxis, haematemesis thrombocytopenia, plasma leakage, increased HCT, leads to shock, DIC, bleeding, organ impairment may take place.

Sampling for lab diagnosis-

Serum- in acute phase of disease (0-5 days of onset) for RTPCR

Serum- After 5 days of fever for IgM ELISA

CHIKUNGUNYA

It is a dengue like disease, caused by arbovirus belonging to family *Togaviridae*. Transmitted by mosquito *Aedes aegypti*. Presented with high grade fever, arthralgia (severe and may last for months to year), also headache, rashes, purpura, vomiting, epistaxis is seen.

Sampling for lab diagnosis-

Serum- in acute phase of disease (0-5 days of onset) for RTPCR

Serum- After 5 days of fever for IgM ELISA

INFLUENZA

It is an acute respiratory tract infection by any of the 3 subtypes of influenza virus (Type A, B & C). Type A causes pandemics eg H1N1, H5N1.

The disease is heralded by abrupt fever, headache, myalgia, and cough.

Sampling for lab diagnosis-
Throat Swab . 0-7 days of symptoms

HEPATITIS A

An acute infection by hepatitis A virus (HAV) but complete recovery is seen in >98% cases. Presented with fever, nausea, vomiting, dark urine and jaundice. 80-95% infected children are asymptomatic but 80-90% infected adults are symptomatic (icteric). Transmitted by faeco-oral route.

Sampling for lab diagnosis-
Serum- after 1 week - 10 weeks (anti HAV IgM)

HEPATITIS B

An infection by hepatitis B virus (HBV) causing major pathology in liver. Usually it is self limiting but in 5-15% cases chronic carrier state is seen which may lead to chronic active hepatitis, cirrhosis-liver, hepatocellular carcinoma and primary liver cancer. Transmitted by parenteral and sexual route. There are several markers of HBV infection indicating various stages of illness.

1. HBsAg- (acute clinical illness) Acute hepatitis B, but if persists after clinical illness . chronic hepatitis.
2. Anti HBs- Recovery/ immunity/ vaccination- (after 2 months of acute illness)
3. Anti HBc- IgM (acute illness to 3-6 months)- Acute hepatitis, IgG (acute illness to indefinitely)- Chronic hepatitis with active viral multiplication.
4. HBeAg- Viral multiplication/ Infectivity (during acute clinical illness)
5. HBV DNA- Viral multiplication/ Infectivity (during acute clinical illness)

Sampling for lab diagnosis-
Serum- As given above with markers.

HEPATITIS C

A parenterally transmitted infection by hepatitis C virus (HCV). 50 % cases are asymptomatic and 50% cases become chronic. Clinical presentation is mild- jaundice, nausea, anorexia, but chronic hepatitis may lead to cirrhosis of liver and liver cancer.

Sampling for lab diagnosis-
Serum-

HEPATITIS E

An infection by hepatitis E virus (HEV) which is transmitted by faeco oral route and causes self limiting acute viral hepatitis for few weeks, presented with jaundice. It affects young adults (15-44 years), No chronic carrier state is reported.

Sampling for lab diagnosis-
Serum-