

MALARIA

Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. It is prevalent in tropical and subtropical regions where the Anopheles mosquitoes can survive and multiply.

Symptoms of Malaria:-

Symptoms of malaria typically appear 10-15 days after being bitten by an infected mosquito. include:

Fever and chills, Headache, Nausea and vomiting, muscle pain & fatigue, sweating, Abdominal pain and diarrhea, Anemia, jaundice.

Causal Agents:-

Malaria is caused by plasmodium parasites. There are five species of plasmodium that cause malaria in humans; Plasmodium falciparum, plasmodium vivax, Plasmodium ovale, plasmodium malariae, plasmodium knowlesi.

General cause:-

The primary cause of malaria is the bite of an infected Anopheles mosquito. The life cycle of malaria involves the following stages; mosquito stage, liver stage, blood stage.

Treatment:-

Common antimalarial medications include; Artemisinin-based combination therapies (ACTs), chloroquine, Primaquine, Quinine, mefloquine.

Preventive measures:-

Insecticide-treated nets, indoor spraying, eliminating breeding sites, prophylactic medications, vaccination (RTS, S/AS01)

TYPHOID

Typhoid fever is a systemic infection caused by the bacterium salmonella enterica serotype Typhi (often referred to as salmonella Typhi). It is transmitted primarily through the ingestion of contaminated food and water.

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Symptoms of typhoid:-

The symptoms of fever typically develop 6-30 days after exposure to the bacteria.

Common symptoms include:

- High fever
- weakness and fatigue
- Headache
- stomach pain
- Loss of appetite
- Dry cough
- Diarrhea and constipation
- Rash

In severe cases, intestinal perforation, sepsis, neurological symptoms can arise.

Causal Agents:-

Typhoid fever is caused by the bacterium *Salmonella enterica* serotype Typhi. There is a related but less severe condition called paratyphoid fever caused by *Salmonella enterica* serotypes paratyphi A, B and C.

General Causes:-

Typhoid fever is primarily caused by indigestion of food and water contaminated with *Salmonella* Typhi. The bacteria can survive in water or sewage for weeks and re-transmitted via the

fecal-oral route. common sources include: contaminated water, contaminated food and poor sanitation and hygiene.

Treatment of typhoid:-

Treatment of typhoid fever involves anti-biotics to kill the bacteria. common anti-biotics include:

- ciprofloxacin
- Azithromycin
- ceftriaxone

Supportive care is also important and may include.

- Hydration
- Nutrition
- fever management

Preventive Measures:-

Vaccination, safe food and water, good hygiene and sanitation.

DENGUE

Definition of dengue:-

Dengue fever is a mosquito-borne viral infection causing a severe flu-like illness. It is caused by the dengue virus (DENV), which has four distinct

serotypes (DENV-1, DENV-2, DENV-3, and DENV-4).

Symptoms:-

Symptoms typically appear 4-10 days after being bitten by an infected mosquito.

Common symptoms include:

- High fever: up to 104°F (40°C)
- severe headache
- pain behind the eyes
- joint and muscle pain
- Nausea and vomiting
- fatigue
- skin rash
- mild bleeding: such as nosebleeds, gum bleeding, or easy bruising.

Causal Agents:-

The primary cause of dengue is the bite of an infected Aedes mosquito. The mosquito becomes infected when they bite a person already infected with the virus. Other factors contributing to the spread of dengue include:

- Urbanization.
- Travel.
- climate.

Treatment:-

There is no specific antiviral treatment for dengue. Management focuses on relieving symptoms and supportive care.

- Hydration
- Pain relief
- Rest

In severe cases, hospitalization may be required for:

- Intravenous fluids.
- Blood transfusions.

Preventive Measures:-

Preventive measures for dengue focus on reducing mosquito bites and controlling populations.

- Mosquito control
- Personal Protection
- Community Efforts
- Vaccination

HEPATITIS

Hepatitis refers to the inflammation of the liver, which can be caused by various factors, including viral infection, alcohol consumption, toxins, medications, and auto-immune diseases, viral

hepatitis is the most common form,
caused by different hepatitis is the
most common form, caused by different
hepatitis viruses: A, B, C, D and E

Symptoms:-

The symptoms of hepatitis can range
from mild to severe and may vary
depending on the type of hepatitis.

common symptom include:

- Fever
- Fatigue
- Loss of appetite
- Nausea and vomiting
- Abdominal Pain
- Dark urine
- Pale stool
- Jaundice
- joint pain

Causal Agents:-

Hepatitis viruses (HAV, HBV, HCV, HDV,
HEV)

General causes:-

contaminated food / water (HAV, HEV),
body fluids (HBV, HCV, HDV), alcohol,
toxins.

Treatment:-

- Antivirals for HBV and HCV
- supportive care
- lifestyle changes.

Preventive Measures:-

Preventive measures for hepatitis depend on the type:

a. Hepatitis A and E:-

1. vaccination:- Effective vaccines are available for hepatitis A.
2. safe food and water:- Ensure food is cooked thoroughly and water is clean.
3. Good sanitation and hygiene practices.

b. Hepatitis B:-

- Vaccination
- safe sex products.
- Avoid sharing needles
- screening blood donation

c. Hepatitis C:-

- Avoid sharing needles
- safe medical practices
- screening blood donations

d. Hepatitis D :- Since HDV requires HBV to replicate, preventing HBV through vaccination also prevents HDV.

e. General Preventive Measures:-

- Avoid excessive alcohol consumption.
- Be cautious with medication and chemicals.
- Regular medical check-ups.

POLIO

Definition of Polio:-

Polio or poliomyelitis, is highly infectious viral disease that primarily affects children under the age of 5. The virus spreads person-to-person and can invade the nervous system, potentially causes paralysis.

Symptoms of Polio:-

The symptoms can be classified into two groups: non-paralytic and paralytic.

* Non-Paralytic Polio

- Fever
- fatigue
- stiffness in neck
- Headache
- vomiting
- pain in the limbs.

* Paralytic polio:-

- loss of reflexes
- severe muscles aches and weakness
- flaccid paralysis

Causal Agents:-

Polio is caused by polio-virus, a member of the picornaviridae family. There are three serotypes of the poliovirus: type 1, type 2 and type 3.

General causes:-

Poliovirus spreads through the fecal-oral route, especially in the area of poor sanitation. This virus also spread through contaminated food and water.

Treatment of Polio:-

Preventive measures polio; treatment focuses on alleviating symptoms and providing supportive care:-

- Pain relief: Analgesics for muscle pain
- Physical therapy.
- ventilators
- supportive care.

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Preventive Measures:

- Vaccination (IPV, OPV)
- good Hygiene
- sanitation
- Public health initiatives.

