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Batch: 59 (online)

Submitted to: Sir Majid

Subject: General Science
Anal. Ability.

ASSIGNMENT # 2.

Q:- Define malaria. Its symptoms, causes. And what are the preventive measure and treatment of malaria?

MALARIA:-

DEFINITION:-

Malaria is a serious and sometimes fatal disease caused by a parasite that commonly infects a certain type of mosquito which feeds on humans. Only female mosquitoes spread the malaria parasites.

SYMPTOMS:-

Signs and symptoms of malaria may include:

- Fever
- Chills
- Headache
- Cough
- General feeling of discomfort
- Nausea and vomiting
- Fatigue
- Abdominal pain
- Rapid breathing
- Rapid heart rate
- Muscle or joint pain
- Diarrhea.

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Malaria signs and symptoms typically begin within a few weeks after being bitten by an infected mosquito. However, some types of malaria parasites can lie dormant in your body for up to a year.

• CAUSES:-

Malaria is caused by a single celled parasite of the genus *Plasmodium*. The parasite is transmitted to humans most commonly through mosquito bites.

MALARIA TRANSMISSION CYCLE:-

Malaria is spread when a mosquito becomes infected with the disease after biting an infected person, and the infected mosquito then bites a noninfected person. The malaria parasites enter that person's blood stream and travel to the liver. When the parasites mature, they leave the liver and infect red blood cells.

• UNINFECTED MOSQUITO:-

A mosquito becomes infected by feeding on a person who has malaria.

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• TRANSMISSION OF PARASITE,

If this mosquito bites you in the future, it can transmit malaria parasite to you.

• IN THE LIVER:-

Once the parasites enter your body, they travel to your liver - where some types can lie dormant for as long as a year.

• IN TO THE BLOOD STREAM:-

When the parasite mature, they leave the liver and infect your red blood cells. This is when people typically develop malaria symptoms.

• ON TO THE NEXT PERSON:-

If an uninfected mosquito bites you at this point in the cycle, it will become infected with your malaria parasite and can spread them to the other people it bites.

OTHER MODES OF TRANSMISSION:-

The parasite that cause malaria affect red blood cells, people can also catch malaria from exposure to infected blood, including:

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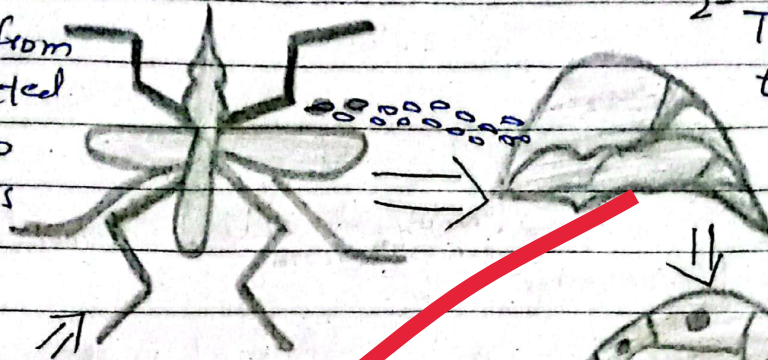
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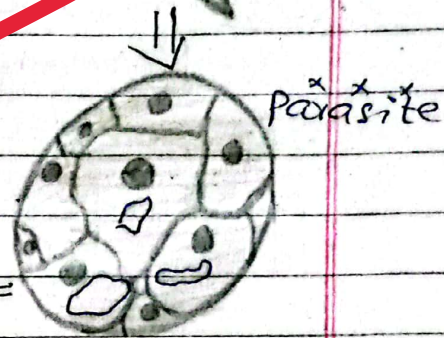
- From mother to unborn child
- Through blood transfusions.
- By sharing needles used to inject drugs.

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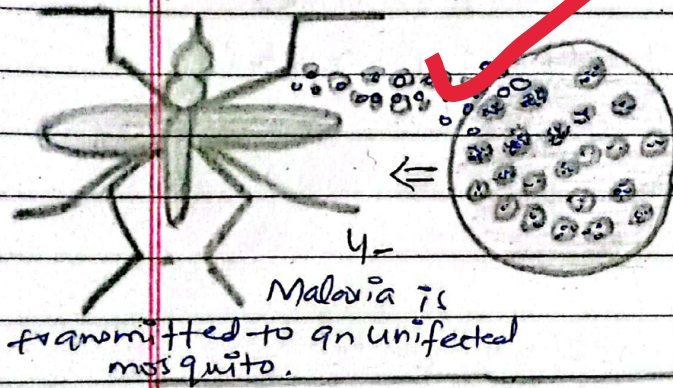
A bite from an infected mosquito transmits malaria.



2- The parasite travel to your liver.



3- Parasite leave the liver and infect Red blood cells.



4- Malaria is transmitted to an uninfected mosquito.

AGENTS:-

Malaria in humans is caused by protozoan parasites of the genus *Plasmodium*, including *Plasmodium falciparum*, *P. malariae*, *P. ovale* and *P. vivax*.

PREVENTIONS

Following are the preventions of malaria:

- Use mosquito net over the bed

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- Elimination of mosquito breeding places.
- Use mosquito repellent.
- Pay special attention to children
- Know the symptoms of malaria.
- Wear long sleeved shirts and long pants
- Keep home clean.
- If you are bitten by mosquito avoid scratching.
- If you traveled and feel sick, particularly if you have fever, talk to a health care provider.

TREATMENT

Malaria is treated with prescription drugs to kill the parasite. The types of drugs and the length of treatment will vary, depending on:

- Which type of malaria parasite you have
- The severity of your symptoms.
- Your age.
- Whether you are pregnant.

MEDICATIONS.

The most common antimalarial drugs include:

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• CHLOROQUINE PHOSPHATE:-

chloroquine is the preferred treatment for any parasite that is sensitive to the drug. But in many parts of the world, parasites are resistant to chloroquine and the drug is no longer an effective treatment.

• ARTEMISININ-BASED COMBINATION THERAPIES (ACTs):-

Artemisinin-based combination therapy (ACT) is a combination of two or more drugs that work against the malaria parasite in different ways. This is usually the preferred treatment for chloroquine-resistant malaria. Examples include artemether-lumefantrine (Coartem) and artesunate-mefloquine.

Other common antimalarial drugs include.

- Atovaquone - proguanil (Malarone)
- Quinine sulfate (Qualiquin) with doxycycline (Oracea, Vibramycin)
- Primaquine phosphate

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CONCLUSION:-

Malaria is a life threatening disease caused by parasites. It kills thousands of people unnecessarily. With immediate and correct treatment people are able to recover from this disease, if appropriate measures are taken.

Overall good answer!!

But is lengthy and will affect your time management. So shorten it a bit

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Q:2 Define Typhoid, Its symptoms and causes. What are the preventive measures of Malaria Typhoid?

TYPHOID :-

DEFINITION :-

Typhoid fever is a life-threatening infection caused by the bacterium *Salmonella Typhi*. It is usually spread through contaminated food or water. Once *Salmonella Typhi* bacteria are ingested, they multiply and spread into the bloodstream.

SYMPTOMS :-

The symptoms of typhoid fever usually develop 1 or 2 weeks after a person becomes infected with the *Salmonella typhi* bacteria.

The main symptoms of typhoid fever are:

- A persistent high temperature that gradually increases each day.
- Headache • Cough • Constipation.
- General aches and pains
- Extreme tiredness (fatigue)

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- As the infection progresses you may
- lose appetite
 - Tummy ache
 - Rash
 - Feel sick
 - Diarrhoea

CAUSES

S typhi is spread through contaminated food, drink or water. If you eat or drink something that is contaminated with the bacteria, the bacteria enter your body. They travel into your intestines and then into your blood. In the blood, they travel to your lymph nodes, gall bladder, liver, spleen and other parts of the body.

People pick up the bacteria most often in places where outbreaks are common. The bacteria passes out of the body in the stool and urine of people who are carrying the bacteria. Without careful hand-washing after going to the bathroom, the bacteria can move from the hands to objects or other people.

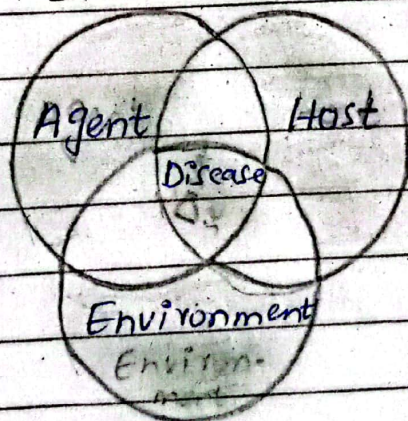
The bacteria also can spread from a person who carries the bacteria. It can spread on food that isn't cooked, such as raw fruits

without a peel. In places where water isn't treated to kill germs, you can pick up the bacteria from that source. This include drinking water, using ice made from untreated water.

• TYPHOID CARRIERS:-

Even after antibiotic treatment a small number of people who recover from typhoid fever still have the bacteria living in their bodies. These people are known as chronic carriers. They no longer have symptoms of the disease. But they still shed the bacteria in their stools and spread it.

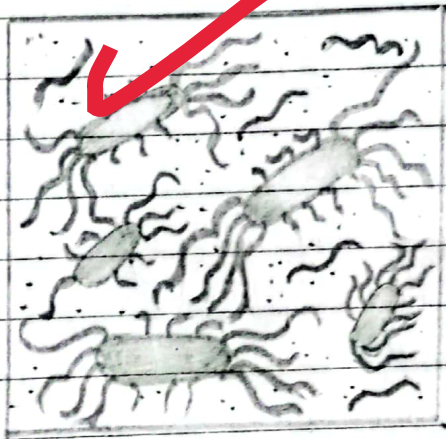
Disease spread through:



AGENTS

Following are the agents of Typhoid:

- Salmonella Typhi.
- Salmonella paraTyphi A, B, C.
- Salmonella ParaTyphi B
- Salmonella ParaTyphi C



Typhoid Bacilli.

PREVENTION

The following can aid in preventing typhoid fever.

- Drinking safe and hygienic water.
- Washing hands thoroughly before initiation of cooking and eating.
- Timely vaccination.
- Good hand hygiene practice in typhoid infected person.

- Wash teeth using bottled water and avoid swallowing shower water.
- Only eat foods that have been thoroughly cooked and served steaming hot.
- Avoid food that have been stored or served at room temperature.
- Avoid food and drinks being sold by street vendors.
- Only eat raw vegetables if they can be peeled. Items such as lettuce are particularly at risk of contamination and are very difficult to clean properly.

TREATMENT:-

Antibiotic therapy is the only effective treatment for typhoid fever.

COMMONLY PRESCRIBED ANTIBIOTICS:-

The medicine you get to treat typhoid fever may depend on where you picked up the bacteria. Strains picked up in different places respond better or worse to certain antibiotics. These medicines may be used

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alone or together.

Antibiotics that may be given for typhoid fever are:

• FLUROQUINOLONES:-

These antibiotics, including ciprofloxacin (Cipro) may be a first choice. They stop bacteria from copying themselves. But some strains of bacteria can live through treatment. These bacteria are called antibiotic resistant.

• CEPHALOSPORINS:-

This group of antibiotics keeps bacteria from building cell walls. One kind, ceftriaxone, is used if there is antibiotic resistance.

• MACROLIDES:-

This group of antibiotics keeps bacteria from making protein. One kind called azithromycin (Zithromax) can be used if there is antibiotic resistance.

• CARBAPENEMS:-

These antibiotics also prevent bacteria from building cell walls. But they focus on a different stage of the process than the

cephalosporins. Antibiotics in this category may be used with severe disease that doesn't respond to other antibiotics.

OTHER TREATMENTS:-

Other treatments include:

• DRINKING FLUIDS:-

This helps prevent the dehydration caused by a long fever and diarrhea. If you are very dehydrated, you may need to receive fluids through a vein.

• SURGERY:-

If the intestines are damaged, you may need surgery to repair them.

Lengthy answer.

CONCLUSION:-

Typhoid is a potentially deadly bacterial infection that can be transmitted through contaminated food or water. It can affect many organs. Without prompt treatment it can cause serious complications and can be fatal. It is important to take steps to prevent the spread of typhoid.

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disease. By ^{*}taking practicing
good hygiene and food safety
measures. We can protect ourselves
and our community from this
serious illness.