

Tuberculosis (TB)

Dr. Sahni BS

DHMS Hons, PGRT (BOM), FF Hom
Deputy Chief Medical Officer (H),
ONGC Hospital Panvel-410221,
Navi Mumbai, INDIA

Website: www.homoeopathyclinic.com

Email: drsahnibs@vsnl.com

Definition

A recurrent, chronic, infectious pulmonary and extrapulmonary disease characterized by formation of granulomas with caseation, fibrosis, and cavitation.

Keywords

Caseation, a form of tissue death in which the area looks like crumbly cheese. It is common in tuberculosis.

Cavitation, the making of hollow spaces in the body.

Granuloma, granulomas, granulomata, a tumor of granulation tissue. It may result from swelling, injury, or infection.

Fibrosis, a fiber like connective tissue that occurs normally in the growth of scar tissue. It replaces normal tissue lost through injury or infection.

Introduction

Tuberculosis (TB) is caused by spore-forming mycobacteria (*Mycobacterium tuberculosis*, *M. bovis*, or *M. africanum*). Children and people with weakened immune systems are the most susceptible to TB. Half of all untreated TB cases are fatal.

TB is spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected. When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow. From there, they move through the blood to other parts of the body, such as the kidney, spine, and brain.

Tuberculosis can affect anyone. People infected with the HIV/AIDS patients, persons with weakened immune systems, and the elderly are at increased risk. Other medical risks include: diabetes mellitus, prolonged corticosteroid therapy, immunosuppressive therapy, cancer, silicosis and being 10 percent or more below ideal body weight.

Disease Process

TB has three stages:

1. Primary (initial) infection
2. Latent (dormant) infection; and
3. Recrudescence (post-primary) disease.

During the first stage, the mycobacterium invades the tissues at the port of entry (usually the lungs) and multiplies over a period of approximately 3 weeks. They form a small inflammatory lesion in the lung before traveling to the regional lymph nodes and throughout the body, forming additional lesions. The number of lesions formed depends on the number of invading bacteria and the general resistance of the host. This stage is generally asymptomatic.

Lymphocytes and antibodies mount a fibroblastic response to the invasion that encases the lesions, forming noncaseating granulomas. This marks the latent stage, and the individual may remain in this stage for weeks to years, depending on the body's ability to maintain specific and nonspecific resistance.

Stage three occurs when the body is unable to contain the infection, and a necrotic and cavitation process begins in the lesion at the entry port or in other body lesions. Caseation occurs and the lesions may rupture, spreading necrotic residue and bacilli throughout the surrounding tissue. Disseminated bacteria form new lesions, which in turn become inflamed and form noncaseating granulomas and then caseating necrotic cavities. The lungs are the most common sites for recrudescence disease, but it may occur anywhere in the body. Untreated disease has many remissions and exacerbations.

Symptoms

Symptoms of TB depend on where in the body the TB bacteria are growing. TB bacteria usually grow in the lungs. TB in the lungs may cause:

- A bad cough that lasts longer than 2 weeks
- Pain in the chest
- Coughing up blood or sputum (phlegm from deep inside the lungs)

Other symptoms of TB disease are:

- Weakness or fatigue
- Weight loss
- No appetite
- Chills
- Fever
- Sweating at night

Some people who are infected may not have symptoms.

How Can I get tested for TB?

A TB skin test is the only way to find out if you have TB infection. You can get a skin test at Hospital's Pathology department or at your doctor's Clinic. You should get tested for TB if

- You have spent time with a person with infectious TB
- You have HIV infection or another condition that puts you at high risk for TB disease
- You think you might have TB disease
- You are from a country where TB disease is very common.
- You live somewhere where TB disease is common (most homeless shelters, migrant farm camps, prisons and jails, and some nursing homes)
- You inject drugs

A Doctor can recommend you the TB skin test. The Doctor will tell you if your reaction to the test is positive or negative. A positive reaction usually means that you have TB infection.

If you have a positive reaction to the skin test, your doctor may do other tests to see if you have TB disease. These tests usually include a chest X-ray and a test of the phlegm you cough up. Because the TB bacteria may be found somewhere besides your lungs, your doctor may check your blood or urine, or do other tests. If you have TB disease, you will need to take medicine to cure the disease.

If you have recently spent time with someone with infectious TB, your skin test reaction may not be positive yet. You may need a second skin test 10 to 12 weeks after the last time you spent time with the infectious person. This is because it can take several weeks after infection for your immune system to be able to react to the TB skin test. If your reaction to the second test is negative, you probably do not have TB infection.

What if I Have Been Vaccinated with BCG?

BCG is a vaccine for TB. It is often given to infants and small children where TB is common. BCG vaccine does not always protect people from TB. If you were vaccinated with BCG, you may have a positive reaction to a TB skin test. This reaction may be due to the BCG vaccine itself or to a real TB infection.

But your positive reaction probably means that you have TB infection if

- Your skin test reaction is large
- You were vaccinated many years ago (because the BCG reaction gets smaller over time)
you have ever spent time with a person with infectious TB
- Someone in your family has had TB
- You are from a country where TB disease is very common.

If I Have TB Infection, How Can I Keep Away from Developing TB Disease?

Many people who have TB infection never develop TB disease. But some people who have TB infection are more likely to develop TB disease than others are.

If you have TB infection (a positive skin test reaction) and you are in one of these high-risk groups, you need to take medicine to keep away from developing TB disease. This kind of treatment is called preventive therapy. Also, if you are younger than 35 and you have TB infection, you may benefit from preventive therapy even if you are not in a high-risk group.

People who have TB infection but do not receive preventive therapy need to know the symptoms of TB. If they develop symptoms of TB disease later on, they should see a doctor right away.

Sometimes people are given preventive therapy even if their skin test reaction is not positive. This is often done with infants, children, and HIV-infected people who have recently spent time with someone with infectious TB disease. This is because they are at very high risk of developing serious TB disease soon after they become infected with TB bacteria.

It is important that you take all the medicines prescribed for you so that your preventive therapy is effective.

How Is TB Disease Treated?

There is good news for people with TB disease! TB disease can almost always be cured with medicines. But the medicine must be taken as the doctor prescribes you.

If you have TB of the lungs or throat, you are probably infectious. You need to stay home from work or school so that you don't spread TB bacteria to other people. Your doctor will tell you when you can return to work or school.

Having TB should not stop you from leading a normal life. When you are no longer infectious or feeling sick, you can do the same things you did before you had TB.

What Are the Side Effects of Allopathic Drugs for TB?

Medicines for TB are relatively safe. Occasionally, the drugs may cause side effects. Some side effects are minor problems. Others are more serious. If you have a serious side effect, **call your doctor immediately**. You may be told to stop taking your medicine or to return to the clinic for tests.

By using allopathic medicines for TB there are some serious side effects, which are listed below.

If you have any of these symptoms, call your doctor immediately:

- No appetite
- Nausea
- Vomiting
- Yellowish skin or eyes
- Fever for 3 or more days
- Abdominal pain
- Tingling fingers or toes
- Skin rash
- Easy bleeding
- Aching joints
- Dizziness
- Tingling or numbness around the mouth
- Easy bruising
- Blurred or changed vision
- Ringing in the ears
- Hearing loss

Why Do I need to take TB Medicines Regularly?

TB bacteria die very slowly. It takes at least 6 months for the medicine to kill all the TB bacteria. You will probably start feeling well after only a few weeks of treatment.

But beware! The TB bacteria are still alive in your body. You must continue to take your medicine until all the TB bacteria are dead, even though you may feel better and have no more symptoms of TB disease. If you don't continue taking your medicine after you feel better or you aren't taking your medicine regularly, this can be very dangerous. The TB bacteria will grow again and you will remain sick for a longer time. The bacteria may also become resistant to the drugs you are taking. You may need new, different drugs to kill the TB bacteria if the old drugs no longer work. These new drugs must be taken for a longer time and usually have more serious side effects.

How Can I Keep from Spreading TB?

The most important way to keep from spreading TB is to take all your medicine, exactly as told by your doctor. You may need another chest X-ray or a test of the phlegm you may cough up. These tests will show whether the medicine is working. They will also show whether you can still give TB bacteria to others. Be sure to tell the doctor about anything you think is wrong.

If you are sick enough with TB to go to a hospital, you may be put in a special room. These rooms use air vents that keep TB bacteria from spreading. People who work in these rooms must wear a special facemask to protect themselves from TB bacteria. You must stay in the room so that you will not spread TB bacteria to other people.

If you are infectious while you are at home, there are certain things you can do to protect yourself and others near you.

Your doctor may tell you to follow these guidelines to protect yourself and others:

- The most important thing is to take your medicine.
- Always cover your mouth with a tissue when you cough, sneeze, or laugh. Put the tissue in a closed paper sack and throw it away.
- Do not go to work or school. Separate yourself from others and avoid close contact with anyone. Sleep in a bedroom away from other family members.
- Air out your room often (if it is not too cold outside). TB spreads in small closed spaces where air doesn't move. Put a fan in your window to blow out (exhaust) air that may be filled with TB bacteria. If you open other windows in the room, the fan also will pull in fresh air. This will reduce the chances that TB bacteria stay in the room & infect someone who breathes the air.

Remember that TB is spread through the air. People cannot get infected with TB bacteria through handshakes, sitting on toilet seats, or sharing dishes and utensils with someone who has TB.

After you take medicine for about 2 or 3 weeks, you may no longer be able to spread TB bacteria to others. If your doctor agrees then only you will be able to go back to your daily routine.

Remember, you will get well only if you take your medicine exactly as your doctor tells you.

What is multi Drug- resistant TB (MDR TB)?

When TB patients do not take their allopathic medicines as prescribed, the TB bacteria may become resistant to a certain drug. This means that the drug can no longer kill the bacteria.

Drug resistance is more common in people who

- Have spent time with someone with drug-resistant TB disease
- Do not take their medicine regularly
- Do not take all of their prescribed medicine
- Develop TB disease again, after having taken TB medicine in the past
- Come from areas where drug-resistant TB is common

Sometimes the bacteria become resistant to more than one drug. This is called multi drug-resistant TB, or MDR TB. This is a very serious problem. People with MDR TB disease must be treated with special drugs. These drugs are not as good as the usual drugs for TB and they may cause more side effects. Also, some people with MDR TB disease must see a TB expert who can closely observe their treatment to make sure it is working.

People who have spent time with someone sick with MDR TB disease can become infected with TB bacteria that are resistant to several drugs. If they have a positive skin test reaction, they may be given preventive therapy. This is very important for people who are at high risk of developing MDR TB disease, such as children and HIV-infected people.

What is the treatment for MDR Tuberculosis?

Advice from a TB specialist is necessary when treating drugs resistant TB or consults a Homoeopath who will advise you properly.

Homoeopathic Treatment

The most common medicines found useful for different kind of TB are:

BONE: Silicea, Drosera, Lapis, Kali carb, Cal hyp.

GLANDS: Drosera, Tuber, Aviare, Silicea, Merc Sol, Cal.Iod

LUNGS: Phosphorus, Ars.Iod, Lyco, Stanum Met, Tuberculinum, Kali Nit, Sulphur, Cal hyphos, Acid galli, Pulsatilla, Kai Carb & Formic Acid.

In certain cases BCG vaccine gives a very serious side effects like urticaria, inflammation of lymph glands. Using medicines like Malandrinum, Thuja & Silicea are competent to cure these side effects.

Apart from the above stated medicines there are many more medicines, which can be given as per the totality of symptoms of the each individual case.

WARNING

"Under no circumstances one should take these medicines by itself."

The above given details about the medicines for treatment of Tuberculosis should be taken under the proper guidance of a qualified & registered Homoeopathic Physician.