



Nursing and Prevention of Tuberculosis

1.Introduction :

Tuberculosis (TB) had been thought an incurable disease for centrys. Lots of people infected with TB avoided to seek medical help because of fear. However, delayed treatment of tuberculosis may worsen the condition, and will put the others who had close contact with the patients at risk. Nowadays, TB control has become commen in Taiwan , and is with good therapeutic effect shorter treatment course. As long as we follow the step with medical staff, the cure rate is extremely high.

2.What is pulmonary tuberculosis (TB)?

Pulmonary tuberculosis is a kind of chronic infectious diseases that caused by mycobacterium tuberculosis. Mycobacterium tuberculosis can\ invade any organs, such as lung,CNS system, lymph nodes, bone, gastrointestinal tract, urogenital tract. Pulmonary tuberculosis (TB) accounts for ninety percent of tuberculosis.

3.How pulmonary tuberculosis transmits?

When the patients cough, sneeze or speak, tuberculosis will spread through the aerosol.People who are exposed to that may be infected. However, for patients who are immunocompromised, they may develop active TB.

4.There are two types of tuberculosis :

The “open” and “closed” tuberculosis. In the case of open tuberculosis, TB bacteria could be spread through the respiratory tract (e.g., coughing). It means that this type of tuberculosis infection is contagious. Based on the organof TB infection, it can be divided into two types : pulmonary TB and extrapulmonary TB (EPTB). EPTB constitutes about 10% of all cases of TB in Taiwan.

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5. High risk group and symptoms of pulmonary tuberculosis :

(1) Who is at risk of developing pulmonary TB: Very young or advanced age, diabetes mellitus, end stage renal disease (ESRD), history of gastrectomy, history of solid organ transplant, drug addiction, people who are immunocompromised (ex. chemotherapy, chronic steroids, or who infected by HIV), smokers, working in an environment frequently contact with TB patients, who's chest X-ray shown Ghon focus.

(2) Signs and symptoms of pulmonary TB : Chronic cough, night sweats, unexplained weight loss, loss of appetite, low-grade fever, (typically happen in the late afternoon or evening). Sometimes it was asymptomatic. Your doctor will be able to give a diagnosis after reviewing your chest X-ray and sputum examinations.

6. How to inspect pulmonary TB?

(1) annual chest X-ray examination regularly, and early detection of tuberculosis.

(2) Direct sputum smear microscopy is Gold standard to diagnose TB.

(3) People has close contact with infectious TB also need to have TB examination.

(4) The following seven-point screening questionnaire are recommended for individuals. Immediately go to Chest Medicine Services in a hospital for sputum cytology and chest X-ray if you score five points or more.

a. (2 points) Cough lasting longer than two weeks

b. (2 points) Sputum

c. (1 point) Chest pain

d. (1 point) Loss of appetite

e. (1 point) Weight loss

7. Treatment for pulmonary TB :

(1) TB can usually be cured, do not buy over-the-counter medicines but looking for your health care provider.

(2) The treatment usually consists of a combination of anti-TB drugs that must be taken for at least six months to nine months. The cure rate is almost 100% if we follow the rules and don't stop taking the medicine. After taking TB drugs for 2 weeks, you will feel better and may not be infectious to others.

8. The side-effects and precautions of TB drugs :

(1) After taking the TB medicine one or two week, some patients will have side-effects: include orange/red urine, vomiting, loss of appetite, liver function disturbance, visual impairment or arthralgia,

but not every side-effect will happen, most people can take it without any problems.

- (2) If you feel nausea and vomiting, you can observe the symptoms and try eat frequent but smaller amounts of meals. When you find jaundice, skin rash; please come back to the hospital immediately.
- (3) Female patients taking the medicine should avoid pregnancy.
- (4) You should take measures to avoid pregnancy during treatment for TB, but still can breast feed normally while taking the first line TB drugs.

9. Precautions of preventing TB transmission in households :

- (1) Ventilate the room. The TB spreads more easily in enclosed spaces with stagnant air. So you should open windows or doors to let fresh air in and let the contaminated air out.
- (2) Anyone who coughs should be educated on cough etiquette and respiratory hygiene. Covering your nose and mouth with a tissue when coughing or sneezing.
- (3) Sunlight is the best bactericide to kill the TB organisms. Expose to the sun is a simple method for disinfecting bedding, blankets, clothes, etc
- (4) Avoid staying in a confined space for a long time, and wear surgical mask when you go to crowded public place.
- (5) During treatment for TB, please eat healthy foods, get enough sleep and some exercise. Having a regular-healthy daily life can help your to fight the infection.

10. What is Yellow Handbook?

The hospital will notify the Centers for Disease Control when the patient is suspected or diagnosed with TB infection, then local health personnel will contact the patient and give he/she the yellow tuberculosis treatment manual (Yellow Handbook) which could discount medical expenses when the doctor make sure that you're a pulmonary TB patient.

11. How to prevent pulmonary TB?

- (1) For infants 24 hours after birth and over 2500g, the BCG vaccine has been shown to provide children with excellent protection against the dissemination of TB. You could bring your children to local health bureau or outpatient clinic of chronic disease prevention as soon as possible.
- (2) People who is over 45 years old should have routine chest X-ray regularly.
- (3) Avoid close contact with someone who has TB.

12. Conclusion :

Nowadays, the vast majority of TB cases can be cured through effective diagnosis and treatment. All you have to do is be patient on treatment and get back to your happy life.