

## Notes for Physicians in the Diagnosis and Treatment of Tuberculosis

- The case rate of drug-resistant tuberculosis has been increasing worldwide. It has become a major threat to human beings in the coming century.
- Multi-drug resistant tuberculosis is almost incurable.
- The rate of initial multi-drug resistant tuberculosis in Taiwan was estimated to be 1.6% in 1996 (J Formos Med Assoc, 1998), and it is increasing alarmingly.
- The active participation of physicians in the tuberculosis control is most essential to prevent the continuous spread of multi-drug resistant tuberculosis.
- All patients with a persistent cough for more than 3 weeks should have a chest x-ray examination and the roentgenogram be interpreted at the same day. Patients with suspected lesions in the roentgenogram should have at least 3 sputum examinations (including smear for acid-fast stain and culture for tuberculosis bacilli) in consecutive days.
- It should be reported to local health authorities whenever a tuberculosis case was diagnosed and the treatment commenced.
  - Patients meet the following criteria should be reported as “confirmed cases”; otherwise, they should be reported as “suspect cases”. A suspect case should be classified into a “confirmed case” or not within 3 months. (Resolution of the 21th meeting of the National Tuberculosis Control Committee).
    - ◆ Clinical case definition: a case that meets the following criteria.
      - Signs and symptoms compatible with tuberculosis (e.g., an abnormal, unstable [i.e. worsening or improving] chest radiographs, or clinical evidence of current disease)
      - Treatment with 2 or more antituberculosis medications
      - Completed diagnostic evaluation
    - ◆ Laboratory criteria for diagnosis
      - Isolation of *M. tuberculosis* from a clinical specimen, or
      - Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained
  - Every reported case will be assigned to a public health nurse in local health station for case holding till he or she completed treatment and for contact investigation.
- Each patient should be queried about previous treatment history carefully before treatment.

- If the patient is currently under treatment at another hospital or clinic, ask him to show the “Tuberculosis Treatment Booklet” in which the previous medications record was kept. Prescribe according to the Booklet as a continuous treatment and make record on the Booklet about your prescription.
- If the patient is currently treated with second-line antituberculosis drugs, he should be asked to receive continuous treatment at an institute authorized for treating drug-resistant tuberculosis (e.g. Chronic Disease Control Bureau, Yuan, and Stations)
- If the patient had never been treated before, the standard short-course chemotherapy should be prescribed:
  - ◆ 2HERZ/4HER; or 9HER;
  - ◆ Fix-dose drug combination such as Rifater, Rifinah should be used in prefer to individual drugs to avoid the emergence of thug resistance.
- During treatment, pay attention to patient drug compliance. Collaborate with the public health nurse in charge to ensure the medications have been adequately swallowed and to observe any possible adverse effect.
- Chest x-ray and sputum examinations should be repeated at 2, 6 (and 9) months after treatment at least. Sputum examination is preferably repeated monthly until negative conversion.
- Drug susceptibility test should be performed on the 1<sup>st</sup> positive culture and when culture positive again after negative conversion. Institutes authorized for treating drug-resistant tuberculosis (e.g. Chronic Disease Control Bureau, Yuan) have the facilities for drug susceptibility testing.
- Whenever treatment failure was suspected or recognized, the patient should be referred to an institute authorized for treating drug-resistant tuberculosis for further treatment as soon as possible. Never add a single medicine to a failing regimen in treating patient with tuberculosis.
- Use of second-line antituberculosis drugs especially ofloxacin/ciprofloxacin and aminoglycosides should be very cautious to avoid creating more incurable drug-resistant tuberculosis.
- “Tuberculosis in Taiwan” world wide web can be accessed at <http://www.tbl.tng.gov.tw>, welcome to visit this site and discuss on line.

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