

A Preliminary Study of Tuberculosis Treatment Failures in Eastern Region, Taiwan, 2018 to 2020

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Abstract

Taiwan has initiated the "Directly Observed Treatment Short-Course (DOTS)" for tuberculosis (TB) control for more than 14 years since 2006. Significant progress in effectiveness had been made as shown by the relevant indicators for TB prevention and treatment.

In 2019, the incidence of TB in Taiwan, Hualien County, and Taitung County were 37, 56.9, and 54.2 per 100,000 population, respectively. Compared with situations in 2006, the rates of TB declined by 49%, 58.7%, and 53%, respectively. Both counties had put great efforts to promote DOTS plan and achieved remarkable results. Although the incidence of TB in the Hualien and Taitung County declined year by year, but cases of treatment failure still occurred in recent years. To understand the risk factors, we reviewed the TB cases in Hualien and Taitung County from 2005 to 2018, the long-term trend of treatment failures, and analyzed treatment failure cases in recent years. We hope to set a reference for future development for TB prevention and treatment in Eastern region.

The study showed that long term trend of TB treatment failures in the eastern region was declining. The cases were more concentrated in aboriginal villages. However, in recent years, treatment failure cases had gradually shifted to towns with relatively sufficient medical resources. In addition, the treatment failure cases had been treated repeatedly. The sputum test did not turn negative after 2-month treatment, and most of

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these cases had poor treatment compliance, with chronic diseases, alcoholism, and smoking, etc. Therefore, in order to strengthen management and avoid the occurrence of treatment failure, we recommend that interventions should be implemented as soon as possible if the sputum tests of TB cases with the above-mentioned risk factors in the Eastern region do not turn negative after two months of treatment.

Keywords: Tuberculosis treatment failure, Directly Observed Treatment Short-Course (DOTS), compliance