Introduction

Praparn Youngchaiyud, Co-chairman

Department of Internal Medicine, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

This issue is a report on the Daiichi-sponsored symposium 'Update Treatment of Multidrug-Resistant Tuberculosis' which was held on November 25, 1998, in Bangkok, as part of the 29th World Conference of the International Union against Tuberculosis and Lung Diseases (IUATLD/UICTMR). Dr Iseman, my co-chair for this meeting, and I believe that the program offered was very exciting, and allowed participants the opportunity of listening to eminent speakers presenting their latest work on the exceedingly worrisome problem of multidrug-resistant tuberculosis (MDR-TB).

Resistance of *Mycobacterium tuberculosis* to antibiotics is caused by amplification of spontaneous mutations in the genes of the tubercle bacilli. Treatment with a single drug due to irregular drug supply, inappropriate prescription, or poor adherence to treatment, suppresses the growth of susceptible strains to that drug but permits the multiplication of drug-resistant strains. This phenomenon is called acquired resistance. Subsequent transmission of resistant strains from an infectious case to other persons leads to disease which is

drug resistant from the outset, a phenomenon known as primary resistance. MDR-TB, defined as resistance to the two most important drugs, isoniazid (INH) and rifampicin (RFP), is a potential threat to TB control. Recently, the WHO and IUATLD Working Group on Anti-Tuberculosis Drug Resistance Surveillance reported data on drug resistance in 35 countries or regions. MDR-TB is present in five continents, with a third of the countries surveyed having prevalence levels above 2% among new patients. The prevalence of acquired MDR-TB ranged from 0% to 54% with a median of 13%.

MDR-TB is an increasingly important health problem around the world. Patients infected with strains resistant to multiple drugs are extremely difficult to cure. There is a high mortality of 80-90% and necessary treatment is much more expensive and toxic. In the presence of HIV, the outcome of MDR-TB is even worse. These startling findings demand that we need to improve our diagnostic approach, implement an organized disease management program, and make sure that patients take their medications regularly.

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Praparn Youngchaiyud, MD
Department of Internal Medicine
Faculty of Medicine Siriraj Hospital, Mahidol University
2 Prannok, Bangkok 10700 (Thailand)
Tel. +66 2 411 4850, Fax +66 2 418 2532

In this symposium, key issues in MDR-TB management were highlighted and open discussions and investigations of these problems presented. Therefore, this very timely symposium was of great importance and benefit in promoting awareness about the rising problems of TB and MDR-TB.

Dr Iseman from the United States, the co-chair and first speaker of this symposium, updated the definition, causes and diagnosis of MDR-TB. He also examined the origins, biologic mechanisms and epidemiology of MDR-TB.

Fluoroquinolones are an important adjunct in the treatment of TB. Ofloxacin has shown excellent activity in animal studies and has clinical efficacy when used for re-treatment. The search for the role of ofloxacin in MDR-TB treatment, in terms of dosage, duration and combination, is needed, to improve the outcome of MDR-TB treatment. To answer these questions, Dr Maranetra from Thailand presented her recent clinical trial using ofloxacin at a dosage of 600 mg/day as part of the anti-TB medication for treating MDR-TB.

Since most developing countries have limited budgets to cover the management of MDR-TB, Dr Mangunegoro from Indone-

sia, the third speaker, discussed the efficacy of low-dose ofloxacin (400 mg/day) in the treatment of Indonesian patients with MDR-TB.

Directly observed therapy (DOT) is the best way to ensure that patients take their medication properly. Indeed, since the global resurgence of TB, directly observed therapy, short course (DOTS) has now become the WHO tool for good TB control. In this symposium, Dr Yew from Hong Kong reported on the strategy of DOTS. In addition, the efficacy and cost-effectiveness of DOTS were discussed.

Finally, Dr Iseman highlighted the treatment and implications of MDR-TB for the next century.

This symposium was held with the aim of uniting top experts in the field of TB treatment to report and discuss the most recently available information. I believe that this meeting was extremely successful in doing just that and generated great enthusiasm among its participants. This allowed for a free-flow of information and ideas, which will provide researchers and clinicians with new vistas for ongoing clinical research into this serious health concern well into the coming century.