Tuberculosis of the Future

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Abstrak

Di awal dan sepanjang abad 20 ada beberapa kemajuan penting dalam penanggulangan tuberkulosis, termasuk ditemukannya vaksin dan pengembangan obat anti-TB. Tetapi, memasuki abad ke-21 ini TB ternyata masih merupakan masalah kesehatan penting. Bila tidak ada perubahan memadai, maka di tahun 2020 jumlah kasus baru akan meningkat menjadi 11 juta jiwa. Masalah TB yang utama meliputi kegagalan memberikan obat dengan baik, penemuan kasus yang lemah, vaksin yang tidak adekuat, meningkatnya resistensi terhadap obat, kegagalan pemberian terapi profilaksis dan migrasi penduduk, epidemi HIV serta infeksi nosokomial. Dalam hal perkembangan diagnosis di masa datang, diperlukan sarana yang mampu mendeteksi infeksi laten, meningkatkan kemampuan pemeriksaan sediaan langsung, memperbaiki diagnosis pasien dengan BTA (-) dan mendapatkan cara sederhana untuk uji kepekaan. Beberapa tehnik diagnosis baru meliputi nucleic acid probes, amplification tests, high performances liquid chromatography (HPLC), gas / liquid chromatography (GLC), dan automated system for radiometric and non radiometric detection dan penggunaan molecular fingerprinting. Di pihak lain, obat baru juga amat diperlukan untuk memperpendek lama pengobatan, mampu mengobati resistensi ganda (MDR) serta dapat mengobati infeksi laten. Beberapa obat / bahan yang diharapkan punya efek anti mikobakterial yang baik antara lain adalah fluorokuinolon, oksazolidinon, nitroimidazol, tiolaktomisin, nitroimidazopiran dan isositrate liase inhibitor. Riset untuk menemukan obat baru memang terbentur pada aspek finansial dan perhitungan kemungkinan keuntungan yang tidak terlalu menjanjikan. Untuk menjamin proses penemuan penderita dan pengobatannya maka harus dilangsungkan program penanggulangan TB secara nasional dengan baik, dan juga di tingkat global. Integrasi program TB dengan penanggulangan masalah merokok serta program penanggulangan penyakit paru kronik mungkin dapat jadi salah satu alternatif. (Med J Indones 2002; 11: 190-4)
<hr><i>Beginning and during the 20th century there were several milestones in TB control, including the development of vaccine and chemotherapy. But , as we enter the 21th century, TB continue be a global public health problem and if there is no improvement in TB control, the number of new TB cases is projected to rise to 11 million by 2020. Problems faced include inability to deliver / assure chemotherapy, deficient case finding, inadequate vaccine, rising level of drug resistance, failure to employ preventive chemotherapy and migration, HIV epidemics and nosocomial transmission. As far as recent advances in TB diagnostics, there is a need to find a tool for identification of latent infection, detection of diseases in migrant and other high risk populations, replace or facilitate AFB microscopy, improve the diagnosis of AFB smear-negative cases, and simple tools for determining drugs susceptibility. New diagnostic technologies includes nucleic acid probes, amplification tests, high performances liquid chromatography (HPLC), gas / liquid chromatography (GLC), and automated system for radiometric and non radiometric detection and molecular fingerprinting approach. In the coming years new drugs are needed, especially to shorten the duration of TB treatment or otherwise simplify its completion, improve the treatment of latent TB infection and to be eliminate. MDR-TB. There are some problems in pursue tuberculosis research because of the high investment required to bring a product to market and lack of likely commercial returns.

Some new drugs and molecules with promising antimycobacterial activity include Fluoroquinolone, Oxazolidinones, Nitroimidazole, Thiolactomycine, Nitroimidazopyran and Isocitrate lyase inhibitor. To deliver good case finding and treatment, effective TB control program should be implemented in the country, as well as globally. The integration of TB control program with tobacco control program and chronic respiratory diseases control program could be one of the alternative. (Med J Indones 2002; 11: 190-4)</i>