EDITORIAL

THE SPECTRE OF DRUG RESISTANT TUBERCULOSIS

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Much concern has arisen in recent years because of the resurgence of tuberculosis (in particular multidrug resistant TB) in the USA and other parts of the world. The WHO estimates that one-third of the world population is infected with the TB bacillus, that there are 8 million new cases of TB annually, and that about 3 million will die of TB per year.

What are the Singapore statistics? Table I shows a steady decline in the annual notification rates for new TB cases – approximately 4% per year since 1980. The number of drug resistant cases has remained low at 1% or less for many years. Even considering the relapsed cases, only 3% were drug resistant. Thus Singapore appears to have escaped the worldwide TB trends which spurred the WHO into declaring tuberculosis a global emergency in 1993[1].

Table I – Distribution of residents with tuberculosis 1960 - 1994

Year	Rates per 100,000 population			Index (base 1960)
	Pulmonary[1]	Extra-pulmonary	Total	
1960	303	4	307	100.0
1970	151	8	159	51.8
1980	93	7	100	32.6
1990	46	5	51	16.6
1994	45	4	49	15.9

[1] Pulmonary TB means TB of the lung parenchyma and includes cases which have both pulmonary and extrapulmonary tuberculosis.

Source: Communicable Disease Surveillance Report 1994

Are we then to sit back in smug satisfaction? On the contrary, there are several reasons why we should increase our vigilance. The alarming trend of TB resurgence in the USA in the mid 1980s was preceded by years of favourable TB statistics which seemed to indicate that this scourge of the past had been successfully subdued.

In the 1970s and early 1980s, short course TB chemotherapy was found to be highly efficacious in the treatment of TB. Complacency set in and TB was considered a disease which could be easily treated, controlled, and possibly eliminated. Furthermore, statistics then showed that TB had been consistently and satisfactorily declining. Interest in TB faded into the background: funds allocated to TB were cut back, dedicated TB clinics were closed and traditional TB physicians were no longer considered vital to TB control. It seemed to be forgotten that patient compliance (or noncompliance) was the key to success or failure in TB control and the prevention of multidrug resistance. Treatment of TB was relegated to general medical clinics and the comprehensive system of supervised therapy and monitoring patient compliance and progress were dismantled in many states in America because of lack of priority and funds. Following these cutbacks, TB incidence rose and, along with the HIV epidemic, caused alarm bells to ring. Thus, the decline of tuberculosis in the US reversed in the mid-1980s. The incidence of multidrug resistant TB cases also rose. The traditional tuberculosis control programme had become a victim of its own success. Thus, authorities spoke of the U-shaped curve of concern: that the descending limb representing the decline in tuberculosis is unfortunately followed by the ascending limb of the U-curve[2].

Another cause for continued vigilance is the spectre of multidrug resistant TB (MDRTB). MDRTB is almost a completely different disease from usual drug sensitive TB[3-6]. Short course chemotherapy is ineffective, the success rate of treatment is low, the mortality rate is high, and surgery may offer the only hope of disease control in many cases. This is reminiscent of the prechemotherapy era of the 1940s.

Recent editorials in the medical journals have called for the return of the traditional TB clinic with its dedicated TB physicians and the close system of patient monitoring by special nurses and social workers[7,8]. The situation in Singapore has not reached alarming proportions yet and our prevalence of multidrug resistant TB is still very low. Also, homelessness and intravenous drug abuse are not as big a problem here as in the US. But the HIV epidemic looms. Multidrug TB resistance is really a function of erratic patient compliance. If multidrug resistant TB is allowed to establish itself, the gains of the previous decades would be lost. Indeed, as multidrug-resistant cases are essentially untreatable, the TB sanatoria of the past may have to be brought back to isolate these cases from the community[9]. We hope Singapore will not repeat the U-shaped experience in the US, but rather, with continued vigilance, experience an L-shaped curve of successful tuberculosis eradication.

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