J. Pharm. Pharmacol. 1997, 49 (Suppl. 1): 1

Tuberculosis Overview: the Current Situation

KEN DUNCAN

Glaxo Wellcome Research and Development, Medicines Research Centre, Gunnels Wood Road, Stevenage, SG1 2NY, UK

In 1993, the World Health Organization declared tuberculosis (TB) a "global health emergency", drawing attention to a problem that had been largely ignored over the past few decades. Rates of TB continue to rise in developing and industrialized nations alike, leading to an estimated eight million new cases every year, and a death toll of three million—more than from any other single infectious pathogen. Several factors have contributed to this increase, such as movement of people around the world, homelessness in major cities, and perhaps of greatest significance, the HIV pandemic. Inexpensive drugs are available to treat TB, but sadly, poor delivery to where they are needed most, and the long and complex regimens required to effect a complete cure, mean that treatment failure is common. The problem has been compounded by the emergence of multi-drug resistant strains. BCG (Bacillus Calmette–Guérin) vaccination programmes have little effect on TB prevalence in many countries.

Sir John Crofton provided a global perspective on TB, focusing on the International Union against Tuberculosis and Lung Disease programmes in Africa, where cure rates of 75–80% have been achieved. The World Bank has shown that curing TB is the most cost effective intervention a country can make to improve the health of the nation. Yet lessons from the past have not been heeded—a recent study in Bombay, surveying the practice of 102 doctors, revealed that 80 different regimens were in use, many of which were more expensive to deliver than the recommended standard regimen.

The BCG vaccine has had a long and chequered history, showing great variation in efficacy in clinical trials conducted in different parts of the world. New vaccines for TB may not be available for another ten years or more. Quoting a meta-analysis of BCG clinical trials, which suggests it has an 80% efficacy rate when used under the right conditions, Professor Michael Groves argued that we already have a very effective vaccine, and that its use should be extended.

In London, it currently takes 8–17 weeks to obtain culture results confirming a diagnosis of TB. The development of new technologies will make it possible to reduce this time to only a few days. Dr Rory Shaw described a simple, rapid test which indicates the presence of alleles of the mycobacterial *rpoB* gene which confer resistance to the antibiotic rifampicin. Thus, it will be easier in the future to begin therapy sooner and to tailor specific treatment regimens in order that potential problems with drug resistance are avoided.