

Medicine by John Grauerholz, M.D.

Return of the White Plague

The threat of returning tuberculosis epidemics—thought a thing of the past—is directly related to budget cuts.

Tuberculosis, a disease classically associated with poverty and social collapse, is making its anticipated comeback as these conditions continue to spread, in both the underdeveloped and advanced sector. In addition to destitute countries, such as Peru, northern Brazil, and Mexico, TB is breaking out in countries such as France, where 13,000 new cases were reported last year.

In order to appreciate the magnitude of the problem it is necessary to know that tuberculosis is the number one communicable disease killer in the world right now. Approximately one-half of the world's population has been infected by the tuberculosis organism (*Mycobacterium tuberculosis*) and there are at least 20 million active cases worldwide.

Tuberculosis had been declining steadily in the economically developed areas of the world over the last 100 years, and had become predominantly a disease of the urban poor. Recently, the decline has slowed, as a result of imported cases among refugees from poorer countries, such as immigrant workers, and the deteriorating conditions in urban centers in the United States and Europe.

The French cases represent the tip of an iceberg whose true dimensions will rapidly become apparent as the present economic collapse continues to unfold. Even the association of physicians in northern France (Nord-Pas-de-Calais), which warned of "a

dangerous recrudescence of tuberculosis in France," believes that the real number of new TB cases is at least twice the 13,000 reported.

In Peru, whose economy has been totally ravaged by IMF austerity measures, the incidence of tuberculosis is 25 cases per 10,000 population, for a total of 36,000 active cases, accounting for 4,000 deaths a year. These cases are directly related to starvation and worsening living conditions, and the increase in other Ibero-American countries, such as Argentina, points to the spread of such conditions.

The number of infected individuals who develop active disease, and the severity of the disease, is a direct function of the health and nutritional status of the population. The vast majority of people infected by the tubercle bacillus do not develop active disease on their initial exposure, except for children and debilitated elderly people who can manifest a fulminant infection, formerly known as "galloping consumption," which can lead to death in days to weeks. Most tuberculosis represents reactivation of a previous infection as a consequence of decreased immune function. It is the widespread exposure to the organism, affecting approximately half the world's population, which creates the potential for the reemergence of tuberculosis as a mass epidemic.

The component of the immune system responsible for resistance to tuberculosis is the so-called T-cell

system, the same system which is selectively destroyed in AIDS (Acquired Immune Deficiency Syndrome). In addition to being responsible for a number of cases of classical tuberculosis, AIDS is also responsible for infections by other members of the *Mycobacterium* species, which normally do not cause human disease.

Another ominous development is the emergence of drug-resistant strains of tuberculosis. In Asia and Ibero-America only the drug of choice, INH (Isoniazid), is used, rather than the current treatment using four drugs at once. This has led to the development of INH resistant strains of tuberculosis. Among Asians and Mexicans entering the United States, 5% of those with tuberculosis have INH resistant disease. However, in Hidalgo County in Texas, 10-15% of Mexicans with TB have the INH resistant form. In addition, resistance is developing to other drugs.

The reason only INH is used in Asia, rather than four-drug therapy, is *budget cuts*, which have eliminated the ability to buy the other drugs. In Ibero-America, lack of health infrastructure has created a situation in which INH is sold over the counter and used without adequate medical supervision and followup.

As conditions in the United States continue to decline, especially in our decaying urban centers, we are beginning to see an increase in childhood tuberculosis being reported. Even if treated, these children are an ongoing reservoir of the disease, which, combined with imported cases, is setting the stage for a major comeback of TB in the years ahead as the standard of living of the population continues to decline. The significance of the French cases is that *it can happen here*, and will, unless prompt steps are taken to alter present trends in nutrition, sanitation, and health care.