



Tuberculosis: Its Long History of Affliction



By Irma West, MD

WORLDWIDE, ABOUT A BILLION PEOPLE, mostly young, died of tuberculosis during the last epidemic - which lasted more than two centuries. That does not include previous mortality from the disease, which has been with us since the Stone Age.

Tuberculosis-like hunchback deformities of the spine were reported in the remains of a young man who died near Heidelberg about 5000 BC. There were similar findings in Denmark and Italy. As early as 2400 BC, Egyptian mummies showed characteristic lesions, and artists drew pictures of hunchbacks in their tombs.

Hippocrates described a deadly lung disease he called phthisis (wasting) about 460 BC and advised his colleagues to avoid attending victims, for they would soon die and sully the physician's reputation.

There were epidemics among pre-Columbian Huron Indians in Canada. *Mycobacterium Tuberculosis* was found in a mummy of a young Inca boy from about 700 AD. Aztec language has three words for tuberculosis. Mayan artists carved hunchback figures. The prehistoric Ainu of Japan were infected.

Yes, there was a 200-300 year tuberculosis epidemic in Europe and America, fueled and sustained by the industrial revolution that brought increasing numbers of young workers from the countryside into filthy, crowded slums in the big cities. The epidemic began in England, peaking in 1750. In Western Europe, the peak was 1800. In America it was 1890. Some African countries may have yet to peak.

The annual mortality for England in 1815 was estimated at 500 persons per 100,000 population, dropping to 300 in 100,000 in 1850 and to 15 in 100,000 in 1960. The death rate for New England in 1800 was 1,000 in 100,000. In the United States it was 113 in 100,000 in 1920, when tuberculosis continued as the leading cause of death. The World Health Organization reports 5.5 in 100,000 as the rate for the Americas in 2005.

Different manifestations of tuberculosis once were considered separate diseases. Scrofula (meaning brood sow), was a swelling of the cervical lymph nodes. It was called *King's Evil* subject to cure by the touch of a King or Queen. Victims were trampled to death during one of Queen Anne of England's touching sessions about 1700.

Percival Pott, a British surgeon, in 1750 described the hunchback deformity of the spine, since called Pott's Disease. Paracelsus, a Swiss physician, visited the mines in Cornwall and wrote the first report on miner's phthisis in 1530.

The bovine strain of tuberculosis is more likely to cause scrofula, bone disease, meningitis, intestinal destruction and lupus vulgaris, a deforming lesion of the face. Pulmonary tuberculosis (consumption) is usually caused by the human strain.

Contributors to understanding tuberculosis included Francisco Sylvius, a professor of medicine in Holland, who first described the tubercle in 1679. Jean Villemin, a German

physician, in 1850 proved that human tuberculosis could be transmitted to cattle and guinea pigs. Dr. Robert Koch identified *Micobacterium tuberculosis* in 1882.

Theobald Smith in 1898 determined both human and bovine strains cause human disease. His finding led to testing of cattle and pasteurizing of milk, which reduced deaths from milk-borne tuberculosis in New York by 67 per cent between 1910 and 1915.



Herman Brehmer built the first tuberculosis Sanitarium at Gorbersdorf in the Bavarian Alps in 1854 and its popularity soon spread as a place where patients could receive bed rest, good food and fresh air. Another popular treatment was moving to mountains or warmer climate. In 1900, one-third of the population of Colorado had tuberculosis.

The National Association for the Study and Prevention of Tuberculosis (now the Lung Association), the first voluntary organization in the United States aimed at a specific disease, was founded in 1904. Its free screening programs using chest x-rays and the skin test, introduced by Charles Mantaux in 1908, were widespread in the 1930s and 40s. The BCG vaccine introduced by Calmette and Guerin of France in 1908 was controversial.

Waksman in 1944 discovered that streptomycin was active against tuberculosis. Other effective antibiotics followed. From 1950 to 1980 tuberculosis plummeted in developed countries only to level off or increase due to HIV and drug resistance. Nations with adequate public health and medical services can keep tuberculosis under control, but the battle against it may be lost in poor countries.

imariewest@aol.com

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Sierra Sacramento Valley Medical Society
5380 Elvas Avenue #100 • Sacramento, CA 95819
916.452.2671 PH • 916.452.2690 FX • Email: info@ssvms.org

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