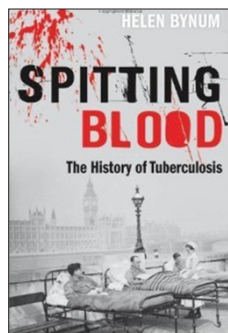


TB's terrible toll



Spitting Blood: The History of Tuberculosis

Helen Bynum

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Reviewed by Ian Orme

This new book, by an experienced medical historian, is a very comprehensively researched exposition on tuberculosis (TB). Although to a limited extent it covers some common ground with earlier efforts (most notably Frank Ryan's 1992 book *Tuberculosis: The Greatest Story Never Told*), it is a beautifully written piece of work covering the history of TB disease from its ancient origins to the present day. In a few places it is a little heavy going, but for the most part the prose skips along nicely and, hence, is thoroughly accessible to a wide readership. Even those of us invested in this field will discover some things we previously did not know, especially some of the more obscure historical details Bynum has uncovered.

Bynum begins the book with a prologue that features just a single person, George Orwell, the famous author who died of TB at the age of 46. During Orwell's years suffering from chronic TB disease, he often complained of "spitting blood" (a symptom called hemoptysis, in his case exacerbated by constant chain smoking), and Bynum uses this as a device to describe and explain in great detail the nature of TB, its symptoms and its pathogenesis. By doing so, she not only neatly provides a human face to the disease but does so in a way that lay readers will be able to follow.

In her early chapters, Bynum describes TB as an ancient disease, tracing its potential carriage into the West via the Bering Strait, which separates Asia and North America, and outlining early descriptions of the disease by the Greeks and then the Romans. After disappearing into the abyss of the Dark Ages, TB reappeared in the tenth through fourteenth centuries, alongside smallpox, typhus and, of course, the plague. At this time we also see the first descriptions of scrofula (TB in neck lymph nodes) and its miraculous cure by touching by someone of royal blood. As we moved into the eighteenth and nineteenth centuries, the TB field entered a golden age of definition of the anatomy of the disease, pioneered by the anatomists Morgagni, Baillie and Laennec. Here, Bynum explains in detail how their descriptions of 'tubercles' in the lungs and the dissemination of disease away from these lesions began to provide a basis for the growing understanding of the disease process.

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After briefly describing TB as a "fashionable disease" that supposedly inspired (and then killed) notable writers such as Keats and the Brontë sisters (who she collectively describes as "consumption's fashionistas"), Bynum then turns to the first great modern advance in the TB field, the discovery of the causative bacillus by Koch in 1882. Over the next few decades, this finding spurred the opening of sanatoriums, in both Europe and the United States, and the realization that living conditions—poor nutrition, poor housing and the like—contributed to the disease. Above all, once it was realized that TB is caused by a microbe, it was accepted as an infectious and communicable disease. In addition to 'rest cures' at sanatoriums, Bynum also describes less effective therapeutic approaches to TB that were used at this time, starting with Koch's tuberculin therapy (the injection of a crude culture filtrate made from bacterial cultures), as well as pneumothorax (collapsing the lung lobe) and phrenicotomy (crushing the phrenic nerve to achieve the same effect), which often did more harm than good.

Some portions of the later chapters of the book are not for the faint of heart. The despicable treatment of children, who were removed from their tuberculous parents and sent to rural farms, and the US establishment of 'preventoriums', which first consisted of a series of tents on Long Island near New York where children as young as five were sequestered away, makes for ugly reading. Similarly unpleasant are Bynum's descriptions of the creeping influence of eugenics, including the use of X-ray machines during World War II to identify Polish and Russian people who were carrying TB and were then promptly shot.

Bynum finishes on ground that is much more familiar. She is rather terse in her description of the use of the BCG vaccine (but this story is very well known), as well as in her description of the discovery and impact of the antibiotics, starting with the discovery of streptomycin. She eventually uses this topic to lead into a discussion of a creeping complacency about TB two or three decades thereafter, much of it promoted by the World Health Organization (about whom she does not mince words regarding their deemphasis on the disease), at which time it was thought TB might even be approaching eradication. We now know the dreadful reality. Not only are TB rates climbing again, but they are fueled by the concomitant epidemic of HIV, a virus that destroys the immune response of infected individuals and hence their ability to combat TB.

If there is anything missing in this book, it is the lack of any description of the considerable research efforts currently ongoing in the field, particularly for new drugs (the new fluoroquinolones and bedaquiline, as examples) and new vaccines. But that is not the purpose of this book, and in my case it certainly did not detract from what is otherwise an excellent piece of work.

COMPETING FINANCIAL INTERESTS

The author declares no competing financial interests.