

The Yesterday and the Today of Tuberculosis and Movies

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Received 20 September 2010; accepted 25 September 2010

Tuberculosis is an illness linked to humankind since time immemorial, and it is an ever-present feature in artistic representations of all times and cultures. This omnipresence is not anecdotal or trivial; it stems from the frequency, seriousness and consequences of the disease, and from the aura of admiration, mystery and fear that has always surrounded the consumption. Until the first reliable statistics were reported in the 19th century, it is difficult to determine its impact, although the high number of clinical descriptions that correspond with its symptoms, and the interest it gave rise to among the great physicians of the different times are evidence of its constant, persistent and devastating presence. In Classical Times, Hippocrates and the medical school of Kos established the concept of *phthisis* and provided a first pathogenic explanation, already sensing its “contagious” nature. Aretaeus of Cappadocia and Galen described the illness more accurately, establishing differential diagnoses between it and other chronic respiratory illnesses, and also establishing therapeutic guidelines based on hygienic and dietetic measures. During the Middle Ages and the Renaissance, the information available about tuberculosis hardly changed, although cases continued to be described and treatments, which were mostly ridiculous (ceremony of the Royal Touch...), continued to be tested. If we pay attention to the more or less scientific and literary evidences, there is no doubt regarding its severe impact. During the 17th and 18th centuries it spread extraordinarily. The massive exodus from rural areas into urban ones in search of work during the Industrial Revolution, together with overcrowding in cities, contributed towards a favourable epidemiologic atmosphere for its spreading, such that it became a serious public health threat, responsible for 25% of adult deaths. However, the “century of tuberculosis” was unquestionably the 19th century, since to its great impact and its varied social consideration we must add the dis-

covery of its etiological agent and the beginnings of scientific study of the illness. The drama and the disaster that accompany the illness coexist with the idealization of consumptive beauty. In certain spheres, tuberculosis was a fashionable and “desirable” disease typical of the rich and of artists. The languor, suffering and fainting of the tuberculosis are considered a way of life, thus marking an aesthetic trend. Nevertheless, this is by no means the reality of tuberculosis: the less fortunate classes “suffered” from “real” tuberculosis, and the decadence of the Romantic ideals only shows the seriousness of the “real” illness, such that the fascination for tuberculosis was lost and it became a source of terror and shame. The need to learn about, become aware of, and, finally, control the white plague stems from this situation. This could be the reason for the appearance of the first statistics reflecting both its frequency and its relationship with unfavourable living conditions (dampness, overcrowding, unhealthy diet...); and it was also during this period that the scientific study of the illness began [Laënnec (1781-1826), Villemin (1827-1892) and many others] culminating in 1882, when Robert Koch (1842-1910) managed to isolate the tuberculosis bacillus and demonstrate its pathogenicity.

The answer to the great questions posed since time immemorial (where? why? how?) is the starting point for the relentless battle against the Koch bacillus, and it opens the door to an unknown world: that of prevention and treatment. It was the time of hygienic and dietary measures related to drugs of the most diverse type, of overeating, of alcohol in moderate quantities, of rest, of sunshine therapy, of “pleasure” trips to “healthy” or exotic resorts, of stays in malaria-risk areas (it was believed that both diseases were opposing), of isolation and medical treatment, of therapeutic pneumothorax... but it was also the time when the health inspection of

cattle began, as well as radiological check-ups of the population and the first attempts at specific pharmacological treatment. And this is where the figure of Robert Koch emerges again who, after a somewhat obscurantist research, revealed the results of his work with his “remedy”, a glycerine extract of a pure culture of tuberculosis bacilli, tuberculin, which was sadly ineffective as a “remedy”, but which is still valid as a method for the diagnosis of infection by tuberculosis. Half a century passed before the real arsenal against tuberculosis came onto the scene: streptomycin (1945), PAS (1946), isoniazid (1952), ethambutol (1967), rifampicin (1967) and pyrazinamide (1972). The power of these drugs and the improvement in living conditions led to a spectacular decline of tuberculosis in the 20th century. It is estimated that in North European countries the rate of child mortality fell from 400-600 children a year out of 100,000, between 1850 and 1900, to less than 50 out of 100,000 in 1950. Considering this situation, optimism caught on among the population and among scientific community, persuaded by the idea that with the help of antibiotics they could manage to control it and finally eradicate it. However, the current situation is very different from what could have been expected: tuberculosis is still a serious public health problem – it is considered a re-emerging illness-, especially in underdeveloped countries. It is estimated that 2,000 million people (1/3 of the world’s population are infected by *Mycobacterium tuberculosis*, which is a considerable reservoir that is responsible for 9.8 million new cases every year, with a yearly death rate close to 2 million (7% of all these deaths and 26% of the death rate due to causes which could have been prevented). But why? What has gone wrong? What has happened? Part of the answers involves a step back into the past and can be deduced from observation of the fact that 95% of these new cases, and more than 1.5 million of the deaths, have taken place in Third World Countries. Immigration, social problems and overcrowding in urban areas are not an isolated phenomenon (regression into poor living conditions); HIV infection has determined the massive appearance of hosts that would be especially susceptible to it (immunodeficiency) (the impact of tuberculosis is 500 times higher in HIV+ patients than in the general population). Its resistance to classic drugs (again without a specific treatment!) has affected the tuberculosis bacillus, and the presence of multi-resistant strains, which are extremely resistant to anti-tuberculous drugs, is worrying. According to data provided by the WHO in 2008, 5% of tuberculosis cases were caused by multi-resistant strains, reaching 22% in certain areas such as the former USSR, where 1 out of every 10 cases produced by multi-resistant strains are extensively resistant). Extensively resistant strains have been detected in 57 countries... These data hinder the plans for the eradication of tuberculosis that were supposed to achieve success in 2010 in the USA and in 2060 in Europe and Japan.

As can be observed from this brief historical outline, tuberculosis has constantly haunted humanity, imprinting its mark on virtually every human activity, especially on artistic manifestations. It is practically impossible to speak of tuberculosis without mentioning art, as it is almost impossible to speak about art without mentioning tuberculosis. Tuberculosis is the central theme in many paintings for its ethereal “beauty” and its raw and listless pain, it is the inseparable companion of great literary figures: “suffered and felt” tuberculosis, with the power to influence creativity, tuberculosis as a trait attached to the life of the artist, who becomes involved in family dramas caused by it, tuberculosis... In this sense, and given the amount of existing evidence, in order to know what tuberculosis is –even though it might seem pretentious in medical terms – it is advisable to tackle the study of tuberculosis as an object of art. From the first works of Diego de Torres Villaroel (1693-1770) – the consumptive is the first to be evicted in *Los desahuciados del mundo y de la Gloria* – to novels such as *The Magic Mountain* by Thomas Mann, *The Tree of Knowledge* by Pio Baroja, *Rest home* by Camilo José Cela, or *The Carpenter’s Pencil* by Manuel Rivas, passing through paintings reflecting the beauty of Simonetta Vespucci as captured by Botticelli, the piercing scenes of Edward Munch, or the desolated image of Alice Neel’s present-day consumptive, they all provide essential information regarding this pathology. In 1895, the irruption of cinema, the perfect blend of image and narration, an encyclopaedia for and about humankind, dealing with its hardships, suffering and achievements, involved a step forward in the contribution of art to science, since cinema could not ignore consumption, the white plague, or the “sickness of the living”. And its contribution is extremely valuable, since, to the expressivity of images, we must add the dynamism of history in space and time, as well as sound, characterizations, settings... that is, all the essentials of “reality”, obviously supported by sound documentary references.

This issue of the Journal of Medicine and Movies provides a thorough compilation, a long walk through cinema with tuberculosis as a guide, its presence ranging from mere allusions (there are several cases of people who have suffered or died from tuberculosis) to anecdotes or key elements in the plot and its outcome. As far as time is concerned, this compilation begins with a first well-known reference from 1907, *Kameliadamen*, the first adaptation of the homonymous novel *The lady of the Camellias*, by Alexandre Dumas, fils, and it ends with a recent release, *Bright Star* (2009), the biography of the Romantic poet John Keats. The sets of symptoms, epidemiology, fear of contagion, different treatments, consequences... are reflected in a fairly realistic way, although they are always impressive and thus difficult to forget. Throughout the pages of this issue, one can also

perceive how tuberculosis has been reflected by cinema from different angles, providing a broad range of aspects, historical and geographical contexts, and points of view. And not only this, since the educational and informative power of cinema was soon sensed and used in such a way that it became one of the cornerstones in the control of tuberculosis, playing an essential role in extensive health-education campaigns. The films produced by the Edison Motion Pictures Company are especially well-known and valuable. In addition, this work (or better, the viewing of the films listed in it) provides a leading historical document due to the high number of biographical adaptations of famous consumptives - Modigliani, Chopin, Keats, Chekhov or Kafka- and of researchers of the stature of Koch, Laennec or Ehrlich...

I do not want to finish without pointing out the thoroughness of the work performed by the authors, since the inclusion of a film does not only depend on its "labelling" as a film where tuberculosis is mentioned and that can be found in several databases, it depends rather on the accurate assessment of the disease's presence by viewing or by checking the dialogues and screenplays in the original language (whenever this is possible) in order to avoid mistakes due to dubbing.

Come in, watch and learn!