

More destructive than guns: contagious epidemic fever and public health in Lisbon, 1810-1812

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Abstract. The paper analyzes the controversy on the contagious epidemic fever in Lisbon between 1810 and 1811. Occurred during the last French invasion in Portugal, the epidemic was caused, among other factors, by the intense migratory flow of refugees displaced to the capital from countryside villages. Faced with the spread of the disease, the health services of Lisbon put in place preventive measures to curb its reach and disseminated preventive guidelines to the population. However, after French retreat in the early spring of 1811, the status of the epidemic itself, as well as the legitimacy of the measures taken, would be the subject of intense dispute. We propose an analysis of the controversy between Henrique Xavier Baeta, a navy physician who reported the events in the *Memória sobre a febre epidêmica contagiosa (1812)*, and the editors of *Jornal de Coimbra*, who published a critical examination of Baeta's book. For the latter, the main disease in those months would have been dysentery rather than fever, and its extent, much smaller than that reported by Baeta. The paper aims to show how different conceptions of disease and health underpinned both sides of the debate that spanned months in local newspapers. The analysis focuses on three of the main axes of the dispute: the effectiveness of the quarantine methods applied, the dispute over the most appropriate fumigation techniques, and the ability of Lisbon's public health services to respond to the crisis.

1 Introduction

Being someone who has the history of medicine as craft, I have always had a mixed feeling of fascination and horror for the painting "Triumph of death" by the Flemish artist Pieter Bruegel (1525-1569). Faced with an army of skeletons that invades and razes a village, the poor inhabitants try desperately to resist amid piles of bodies and debris of what was once their pleasant life. The scene, produced between 1562 and 1563, represents the unavoidable victory of death over worldly things, and its power consists precisely in the dread of the expressions and gestures of those who try, in vain, to avoid their inescapable destiny. Nobles, commoners, clergy, all succumb to the sneak attack of the relentless army that spares no social status. Thus, the work echoes the medieval literary tradition of "macabre dance" and reminds us of the fragility and finitude of human life.

The infernal nature of the scene has always made me reflect on the harshness of the epidemics that, over the centuries, devastated not insignificant portions of the European

population. In a matter of months, entire social structures were razed, forcing drastic changes in the lifestyles of those who survived, often without clearly knowing the origin of the evil that was plaguing them. In view of this, I confess that I was secretly relieved to live in times of “modern” medicine, whose advances – despite the mishaps – have supposedly saved us from mass deaths. Pure naivety of my part, of course. Access to quality health care is still a mirage on the horizon to large portions of humanity and – as current times of Covid-19 proves – not even those who have access to such benefits are fully immune.

As I write this brief paper, I approach the twelfth week of quarantine locked in my apartment in Rio de Janeiro. According to the most recent official data, Covid-19 has already infected some 620,000 people and taken more than 34,000 lives in Brazil alone in just over two months. “Social isolation”, “disinfection” of public and private objects and spaces, “quarantines”, “collapse” of health systems, are just some of the terms and practices that have suddenly become part of our life, reminding us that we continue to succumb to the “triumph of death”. However, neither Bruegel's macabre scene, nor the current pandemic are the main objects of this article, but another historical episode in which the distinctive character that disease and war can take on when combined, produced a deep impact in the ways of life of a particular population.

2 War, fever and medical debates in Portugal

In 1810 Portugal faced the third Napoleonic invasion in its territory. This time the French strategy consisted of the deployment of troops under the command of General Massena across the border with the Spanish territory. From that point, the French army would advance towards the interior of the kingdom until arriving in Lisbon with the objective of repeating the feat of the occupation of 1807. In that year, the Portuguese capital had fallen under the control of the Napoleonic forces for a brief period, after the Portuguese Royal family was forced to flee to Brazil, its main colony at the time, with support from the English navy. [1, 2] During the new invasion attempt in 1810, Portuguese resistance still had the decisive support of English forces; however, the advance of French troops forced the population to move from peasant towns and villages to the capital in search of refuge. With the additional pressure put on a socially and economically weakened Lisbon, it was not long before an epidemic of contagious fever broke out that affected both refugees and the population and troops stationed there.

If, on the one hand, the social disturbance resulting from war and disease reminds us of Bruegel's picture, on the other, it is a time when European public health structures tried to present, even in a weak and controversial way, some response to crises like that one. This last point is precisely the object of our analysis. Fevers, as we shall see, added another controversial issue to this dramatic equation. Its fluid nature and difficult apprehension by medical knowledge meant that diagnoses and, more importantly, prophylaxis became objects of debate producing different reports about the disease and its appropriate methods of cure.

Our narrative takes place in the clash between two characters. On the one hand, Henrique Xavier Baeta (1776-1854), a bachelor's in philosophy at Coimbra University and doctor in Medicine at the University of Edinburgh who had moved away from Coimbra to Lisbon in 1800 because of his liberal ideas. He was the author of the memoir that described the epidemic events of those autumn / winter months of 1810 in Lisbon. On the other hand, the *Jornal de Coimbra*, one of the highlights of the Portuguese scientific press in the 19th century whose editors, José Feliciano de Castilho, Jerônimo Joaquim de Figueiredo and Ângelo Ferreira Dinis, were also doctors who had been trained in Britain. As we will see, although they all played an active role in resolving the crisis, their reports on the events were considerably different and were also reflected in the divergent sanitary initiatives considered appropriate at the time.

Much of the dispute stemmed from the different conception of the disease in question. The quarrel followed the publication of Baeta's *Memória sobre a febre epidemica contagiosa* in 1812, two years after the events. Right in the introduction, Baeta stated that the work had the objective of filling a gap, since, according to him, the epidemic had not been the object of any study by a British or Portuguese doctor. His version of the facts derived from direct observations and notes taken during the outbreak. However, he did not hide his ambition to produce a contribution comparable to the classics of medical literature on fevers, notably the works of Thomas Sydenham (London, 1661-1675), Benjamin Rush (Philadelphia, 1793-1797) and Georg Christian Friedrich Wendelstadt (Wetzlar, 1794-1795). Indeed, Baeta was no stranger to the topic. During his stay in Britain, where he received a doctorate in medicine, he published at least two works dedicated to fevers, *Comparative view of the Theories & Practice of Drs. Cullen, Brown, and Darwin, in the treatment of fever, and of acute Rheumatism* (London, 1800) and *Dissertatio de Febribus Intermittentibus poecipus medendis* (Edinburgh, 1800).

Baeta's narrative had as its starting point the Battle of Buçaco, one of the main clashes between the French and Anglo-Portuguese troops during the war, which took place in September 1810. The victory obtained by the resistance to the invaders was decisive for the weakening of the French forces and would help to pave the way for the definitive victory of the Lusitanians against Napoleon. However, the repositioning of Massena's troops towards Lisbon forced the stealthy displacement of the Anglo-Portuguese to the *linhas* of Torres Vedras, a set of fortifications aimed at protecting the Portuguese capital. According to Baeta, the withdrawal of allied troops made the inhabitants of the regions of Beira Alta, Beira Baixa and Estremadura flee "in haste abandoning their houses and goods". Most of them went to Lisbon where they settled in precarious conditions contributing to saturate the field hospitals installed in the capital

"[...] without separating any of the patients who had contagious diseases; without convalescent wards, and without ordering themselves, or strictly adopting all appropriate means, and be able to cut short the communication of contagion". [3]

The author highlighted the low morale of the convalescents as a fundamental element for the degradation of their health. The vision of the invading troops and the withdrawal of the allies in the direction of the capital would have generated "such a state of dejection of spirit that many fell ill with fevers and other diseases of which not a few died [...]". [3] The precarious housing conditions to which both the refugees and the population of Lisbon were subjected did not help either. Many of these unfortunates shared the same houses, which by neglect or by lack of means were already "mired in filth". [3] Baeta also condemned the habit of closing doors and windows as protection from the cold, which made it difficult to ventilate inside the houses "breathing therefore, an impure air almost always". [3] Such a state of affairs would have contributed to the appearance of "a particular type of fever" from mid-October. A month later, the disease took on a "contagious appearance" and began to affect the employees of the military hospitals and the Hospital Real de São José, who were in closest contact with the sick.

According to Baeta's diagnosis, the epidemic had been caused by a contagious fever characterized by chills, headaches, "body and spirit weakness", poor appetite and restless sleep. Although the symptoms seemed less intense at first, with patients keeping "an almost natural pulse", they tended to intensify dramatically over the days. After one week on average the increase in body heat and the acceleration of the pulse was added to the appearance of inflammatory conditions in the liver and brain, as well as nosebleeds. Fatal cases showed a severe swelling of the abdomen, a purple appearance of the skin, involuntary bowel movements, and urine delusions and wheezing among other symptoms. According to Baeta's

report, contagion was not restricted to refugees, causing serious damage also to the population of Lisbon and to the English and Portuguese troops stationed in the city.

It was not long before public health initiatives were launched. The *Academia de Ciências de Lisboa* appointed a commission of doctors to assist refugees, under the leadership of Francisco Tavares (1750-1812). At an extraordinary meeting, the members of the institution's natural sciences section discussed ways to medically and economically help the sick, and to cut the spread of the evil short. Part of the commission's prerogatives consisted of the distribution of medicines, in which they faced great difficulties due to the shortage of sulfuric acid, one of the main substances required for their production. [4]

The commission's tortuous performance was another expression of the great difficulties faced by health services in Portugal at that time. The war had interrupted the arduous and slow process of building the kingdom's health structure whose origins dated back to the middle of the 18th century. [5] With the departure of the Royal Family in 1807, the political and economic crisis reached a new level, further compromising the capacity to respond to health crises. However, this was not the only element at stake. In addition to the material conditions, the very nature of the disease and the appropriate measures to overcome it were also subject to debate even *a posteriori*.

Not long after Baeta's work was released, the editors of the *Jornal de Coimbra* published a harsh article in the July-August 1812 issue. [6] They accused Baeta of having made a misdiagnosis of the epidemic. The disease responsible for most of the dead was not a contagious epidemic fever, but dysentery, which was already raging inside the kingdom and would have been spread by the displacement of refugees and troops. The disease was easy to cure when treated early, but the soldiers especially received treatment only twenty or thirty days after contagion, a fact responsible for a large number of deaths in the military hospital and in São José. The originality of Baeta's work was also called into question, as other doctors had written about the epidemic, especially the *ministros de distrito* of Lisbon, who reported their observations to the *Intendência Geral de Polícia*, the institution responsible for coordinating police and sanitary activities in the capital. [6]

The responsiveness of the hospitals and the population of Lisbon would also have been underestimated by the author. There is no denying that there had been difficulties, mainly due to the action of French troops in disrupting the supply to hospitals, however this had not prevented the care of the sick in those institutions. [6] The editors also stated that despite the difficulties encountered by the *Academia de Ciências*, there was no shortage of medicines in military hospitals. Baeta's critics claimed to have better knowledge of the events since they already worked in hospitals long before the epidemic, and also that the author would not have had such a distorted view "had he entered the hospitals during the epidemic". [6]

Baeta's first reply came in a letter published in the newspaper *Investigador Português em Inglaterra* in the January and February of 1813 issues. As expected, he reaffirmed that the contagious epidemic fever would have been responsible for most of the deaths, although he conceded that he should have dedicated some pages to dysentery in his publication. However, Baeta claimed the latter disease would have raged before the fever, and only later would have been displaced by it. [7] In any case, both had the same nature and, therefore, should receive the same treatment.

Here the author touched on one of the crucial points of the controversy that would extend over the following months. Both dysentery and epidemic fever should be treated with bleeding, as stated both by modern authors such as Robert Watt, and classic authorities such as Galen and Amato Lusitano. The editors of *Jornal de Coimbra* disagreed on this point and claimed that the clinical experiences of doctors at Hospital Real de São José as well as in the military hospitals considered "mild laxatives and acid drinks" as the most effective remedies. In their clinical practice they never found any case where leeches were needed. When quoting Zimmerman, they claimed that the procedure would only be necessary when fever or

dysentery had inflammatory manifestations, which had not been the case during those months in Lisbon. [8]

Another point of disagreement was the origin of the epidemic itself. As we have seen, Baeta pointed out that the low morale of the refugee population would have been decisive for the outbreak. His claim was based on medical axioms of vitalist matrix that emphasized the reciprocity between the physical and moral aspects of individuals. [9] In other words, the emotional disturbance of a population struck by war would have affected their organic constitution, causing the fever. The editors of the *Jornal de Coimbra* had a more organicist perspective, arguing that it was not the mood of the individuals but the approach of winter that would have favoured contagion on a large scale. It would not be by chance that the epidemic had receded from March, with the end of the cold season, and practically disappeared in July, during the summer.

Baeta identified the same time span as contagions but, according to his interpretation, it was the vision of the defeat of the French army what encouraged the sick and made possible the end of the epidemic.

3 Conclusions

The controversy continued in two more issues of the *Investigador Portuguez em Inglaterra* and in the *Jornal de Coimbra* with no apparent reconciliation between the parties. In any case, there is still a lack of analysis about other actors involved that could help us answer some remaining questions that will be the subject of future research. The first one: what were the interests of actors whose opinions were not printed on the pages of newspapers? Beyond their purely medical aspects, the political dimensions of controversies such as these cannot be underestimated. Secondly, there is also a lack of more detailed analysis of the performance of the *Academia de Ciências de Lisboa* in the events. Although we already know that the commission appointed by the institution encountered numerous difficulties, it would be worth investigating the reports of its members and contrasting them with the writings of Baeta and the editors of *Jornal de Coimbra*. In this sense, it would also be necessary to analyse the reports produced by the *ministros de distrito* of Lisbon and collected by the *Intendência Geral de Polícia*.

These questions will begin to be answered as soon as it is possible to resume our work in the Lisbon archives, when the current pandemic of Covid-19 ends. However, some conclusions can already be drawn from what has been done so far. In addition to Lisbon's extreme social and political precariousness by the time the epidemic hit, divergent reports about the nature of the disease are another factor that cannot be overlooked. From the analysis, even partial, of the above-mentioned reports, it can be noted that the understanding that the different authors had about the nature of the disease they were fighting was decisive for their narrative of the events. As far as their political and institutional affiliations are concerned, the weight attributed to the extent of the epidemic, its causes, and the profile of the victims, as well as the appropriate forms of treatment, varied depending on their diagnoses regarding the disease. Fevers, in this sense, meant an extra challenge, since these were diseases still hotly debated in the early 19th century. Characterized by a broad and diffuse spectrum of pathological manifestations, which did not always have high body temperature as a definitive characteristic [10], fevers used to generate multiple and diffuse interpretations among practitioners of medical art. However, this issue should not be taken as a mere inability of doctors at the time to produce consensus, on the contrary, it directly reflected the dynamics of production and affirmation of knowledge of 19th century medicine. In short, the present one was just another chapter of the eternal battle against the "triumph of death".

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