

*J. Martins e Silva*

**Porto: The 1899 Plague Epidemic – Circumstances and Consequences**

Porto: a epidemia de peste de 1899: circunstâncias e consequências

Porto, U. Porto PRESS, 2022

508 p., Paperback

CHF 25.00/EUR 25.00/USD 27.00

ISBN: 978-989-746-340-2

Series: Coleção Estudos e Ensino; 2

As the name suggests, this work by João Martins e Silva, a retired Full Professor of the Faculty of Medicine of the University of Lisbon, and its former director, has as its main objective the detailed study – determinants, context, evolutionary process, responses, and consequences – of the bubonic plague epidemic that took place in the city of Porto in the last half of 1899. But, in fact, this work is much more than that.

It is a detailed, well-documented, and informative account of the history of the great “pestilences” – the great threats to Public Health – from antiquity to the end of the 19th century, in search of manifestations of what is recognized as plague epidemics: a wave of people who become seriously ill in a community, with swellings in the lymph nodes, particularly in the groin, but also in the armpits – the “buboes” – preceded by the appearance of a substantial quantity of dead rats, in that same community (greatly simplifying).

Hence, the characterization of the three historically identifiable plague pandemics was as follows: the “Plague of Justinian,” in the middle of the first millennium after Christ, the “Black Death,” in the 14th century, and the third that hit Europe in the 19th century. The Porto epidemic of 1899 was the last clear manifestation of this third pandemic in Europe.

This is also the story of the genesis of the “microbiological theory of disease,” from the first microscopic observations of Antonie van Leeuwenhoek (1632–1723) to the microbiological work of Louis Pasteur (1822–1895)

and his collaborators in France and the team of Robert Koch (1843–1910) in Germany. It is always fascinating to observe how difficult it was to overcome entrenched explanatory conceptions such as the miasmatic origin of a disease or the “spontaneous generation” (non-transmission) of pathogens.

In this context, follows the identification of the plague bacillus by a collaborator of Pasteur, Alexandre Yersin (1863–1943), a Swiss doctor and researcher of French origin, when already living in Indochina, goes to Hong Kong, in the grip of the plague epidemic, and identifies *Yersinia pestis* (1894). And then came the vaccine and the anti-plague serum. Four years later, Paul-Louis Simond (1858–1947) discovered the transmission mechanism, from infected rats to humans, via fleas.

Finally, there is Europe, Portugal, and Porto. A bipolar world: great progress in the sciences, arts, technology, new forms of communication and transport on the one hand, and, on the other, poverty, insalubrity, unemployment, often miserable living conditions, crass ignorance of much of the population, with the singular backwardness of the institutions of public administration, education, health, and government (“cemetery city” as Ricardo Jorge called his city, due to its insalubrity and health indices lower than those of other cities of his time).

The work articulately describes the main ingredients of the events concerning the plague epidemic in the city of Oporto in 1899. It does so in a systematic, detailed and extremely well-documented manner, illustrated by appropriately selected images (photographic and others). Of these ingredients, we will highlight the following here:

- The identification of the microbiological agent causing bubonic plague had occurred about 5 years before the outbreak of the epidemic in Porto, while the predominant transmission process, from rat to flea and from flea to man, had been described the year before the start of this pandemic. Also, the tools and culture of translation, from scientific knowledge to medical practice, were much less effective than in our days (even though still imperfect). The result was skepticism and

controversy in the health professions about the measures taken to tackle the health crisis.

- A population with little access to knowledge, confused by the contradictory messages coming from the authorities and from the media, at first negative about the existence of a plague epidemic, and then increasingly revolted by the restrictive measures taken. These began with isolation and disinfections, evolving into a sanitary cordon, the “siege of Oporto,” which isolated the city from the rest of the country, with devastating social and economic consequences.

This took place in a context in which the morbidity and mortality of the disease were not close to those of other health catastrophes of other times and places: in this period, just over 300 cases were observed, with a lethality rate of 36%. The high concentration of disease in the poorest parts of the city should also be noted.

- A particularly aggressive social climate that forced Ricardo Jorge, then Director of the city’s Municipal Health and Hygiene Services, to leave Porto, accused of “inventing an epidemic” and, therefore, of being at the origin of the measures taken to combat it and its consequences. Unjustly ignoring that it was (to) the precocity of the causal diagnosis of the epidemic and the measures proposed by Ricardo Jorge that, most likely, resulted in the moderate expression of this epidemic phenomenon.
- The epidemic made evident the weaknesses of the health infrastructure to meet this challenge, both in terms of public health and health care provision, in a particularly adverse context for the country’s finances.
- Decisions by the political powers in Lisbon, taking severe measures to protect the rest of the country from the possible effects of the epidemic in Porto, of doubtful necessity and effectiveness, but at a very high price for the inhabitants of that city. Measures decided at a distance, with limited knowledge of the local situation, often accompanied by controversial explanations – that there would be preferable alternatives to the cordon sanitaire adopted, but that they would have no effect on the Portuguese people “little accustomed to hearing about hygiene and lacking the discipline and education necessary to subject themselves to the prescriptions and regulations that are indispensable.”

Ricardo Jorge’s forced departure from Porto and his insertion in the academic and health administration

institutions in the capital had the beneficial effect of allowing him to learn nationally from the experience of the Porto epidemic and led to a historic reform of Portuguese public health, a precursor to current institutions such as the Direção Geral de Saúde, the Instituto Nacional de Saúde Ricardo Jorge and the Escola Nacional de Saúde Pública.

This work has, among other virtues, a remarkable particularity. This is the combination of a clear thread, through a long historical period, about the effect of bubonic plague on human communities, with rigorous in-depth observations, experiences and arguments concerning the evolution of knowledge about the disease and its main determinants, far beyond the Porto pandemic of 1899.

The lessons that this work by João Martins e Silva provides are multiple, especially at a time when the country and the world still have vivid memories of the most critical periods of the COVID-19 pandemic, as the author acknowledges. It is about knowing how, in a serious and sudden threat to Public Health, science, medical and public health practices, the attitudes and behavior of the population, the state institutions, and the political power interact. And how important is the need to improve the relationship between rapidly evolving knowledge production and political decisions in the response to the pandemic, the strengthening and requalification of public health units in the country and the National Health Service as a whole, the continuous empowerment of people to make informed, intelligent decisions about their own health.

*Constantino Sakellariades, Lisbon*

### **Conflict of Interest Statement**

The author has no conflicts of interest to declare.

### **Funding Sources**

No funding was received.

### **Author Contributions**

One author only.