

## DEVASTATING EPIDEMICS IN RECENT AGES GREEK POPULATIONS

### RAZARAJUĆE EPIDEMIJE GRČKE POPULACIJE U NOVIJE DOBA

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#### SUMMARY

*In the recent Greek ages the most devastating epidemics were plague, smallpox, leprosy and cholera. In 1816 plague struck the Ionian and Aegean Islands, mainland Greece, Constantinople and Smyrna. The Venetians ruling the Ionian Islands effectively combated plague in contrast to the Ottomans ruling all other regions. In 1922, plague appeared in Patras refugees who were expelled by the Turks from Smyrna and Asia Minor. Inoculation against smallpox was first performed in Thessaly by the Greek women, and the Greek doctors Emmanouel Timonis (1713, Oxford) and Jakovos Pylarinos (1715, Venice) made relevant scientific publications. The first leper colony opened in Chios Island. In Crete, Spinalonga was transformed into a leper island, which following the Independence War against Turkish occupation and the unification of Crete with Greece in 1913, was classified as an International Leper Hospital. Cholera struck Greece in 1853-1854 brought by the French troops during the Crimean War, and again during the Balkan Wars (1912-13) when the Bulgarian troops brought cholera to northern Greece. Due to successive wars, medical assistance was not always available, so desperate people turned many times to religion through processions in honor of local saints, for their salvation in epidemics.*

**Keywords:** devastating epidemics; Greece; recent ages.

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## INTRODUCTION

In recent ages mostly devastating epidemic diseases in Greek populations were plague, small-pox, leprosy, and cholera. The health conditions and settings, following successive wars, were poor. This added more difficulties to cope with the diseases.

## METHODS

Review of the international and Greek literature regarding plague, small-pox, leprosy and cholera epidemics in Greek populations, during the recent ages.

## RESULTS

### PLAGUE

The first Greek report about plague was that of Trebizond in 1346, by the chronographer Michael Panaretos. (1, 2) The second was recorded in Crete in 1580. (3)

Later plague hit Corfu – Kerkyra (1611, 1630, 1648, 1673); Zante or Zakynthos (1617, 1646, 1692, 1728); Cephalonia (1646, 1760); Ioannina (1647); Kalamata (1717-1718); Thessaloniki - 500 dead daily (1741); Lepanto (Nafpaktos) and Leukada (1743); Constantinople (1778). (4-7)

The Greek people named the plague *thanatiko* (thanatos meaning death), or *loimos* (severe disease), against which only the interventions of the Saints were left as the people's last hope of stopping the calamity. (8)

The plague of 1812-1819 was the most deadly. Many Greek Aegean Islands were deserted. In Tyrnavos – Thessaly Central Greece region (1812-1816), where a sick Tartar from Istanbul spread the disease, the victims reached the number 8600 and the commercial and industrial activities decreased. (9)

In 1814 the plague struck Constantinople, Smyrna, Chios, Samos, and Thessaloniki. Pouqueville states that “the 1814-1819 plague epidemics devastated one-sixth of Europe's population and one fifth of the other regions.” (10, 11)

In 1823 and 1828 the plague spread among the war refugees inhabiting the district of Providence in Nafplio, a picturesque town in the Peloponnese. It was the first capital of free Greece after the 1821 War of Independence against the Turkish occupation. Nafplio suffered the greatest number of plague

epidemics; in 1729 (2/3 of the population lost), in 1757 and in 1791 (3/4 of the population lost). To address the very serious situation, in March 1823 hospital operation in town was decided. King Otto's father, Ludwig of Bavaria commissioned Christian Siegel, a professor of sculpture in Athens, to re-construct the sleeping Lion of Lucerne in the memory of the Bavarian soldiers who had died from plague in Nafplio, far away from home. Since then this monument became an important sight of Nafplio. (12, 13)

The major global plague pandemic began 1894 in China. Within 10 years (1894 -1903) it spread rapidly carried by rodents transported in commercial steamboats, to 77 ports on five continents: Asia (31 ports), Europe (12 ports) Africa (8 ports), North America (4 ports), South America (15 ports) and Australia (7 ports). (14)

During the 20th century the plague appeared in various Greek cities. In 1922 the plague hit the refugees who had been pushed away by the Turks from Smyrna and Asia Minor and had settled in Patras. The plague appeared in Athens and its great port Piraeus (1923-1926), numbering 55 and 63 deaths in 1924 and 1926 respectively. During the same period, the plague hit the ports of Patras, Kalamata, Halkida, which was attributed to the infected mice, arriving with the foreign ships. (15)

#### SMALLPOX

The Chronicle of Papasynadinos is the first in Greek literature to mention smallpox, when the narrator's three-year-old daughter Zoe died of it in 1623. (16)

It should be noted that the first smallpox inoculation was done in Greece, by women in Thessaly and Macedonia, with pus from patients' blister during their recovery. The first relevant scientific publications were presented by the Greek doctors Emmanouel Timonis (Oxford, 1713) and Jakovos Pylarinos (Venice, 1715). (17)

Lady Montague, the English ambassador's wife in Constantinople, witnessed the practice of inoculation against smallpox -variolation- with live smallpox virus from a smallpox pus blister in a mild disease case, which was introduced into scratched skin of an uninfected person to promote immunity to the disease. Lady Mary's brother had died of smallpox in 1713 and her own famous beauty had been marred by a bout with the disease in 1715. On her return to London after 1717, she enthusiastically promoted the procedure, but encountered a great deal of resistance from the medical establishment, because it was an Oriental folk treatment process. (18)

## LEPROSY

The social perception of lepers was generally one of fear, and they were often required to wear clothing that identified them or carry a bell announcing their presence. The 3<sup>rd</sup> Lateran Council of 1179 and a 1346 edict by King Edward expelled lepers from city limits. Because of the moral stigma of the disease, methods of treatment were both physical and spiritual, and leprosariums were established under the purview of the church. (19)

There are many mentions of leprosy in Greece, mainly by travelling doctors, such as the French Tournefort in 1700. They describe the characteristic patient's conditions of life and the endemic leprosy location in certain regions, such as Crete, Smyrna, Chios, Mytilini. (20)

The first leper colony in Greece and one of the first in all of Europe opened in 1378 on Chios Island. It was called Lovokomeio, from the Greek word *λωβός* (*lovos*) meaning a person with disfigured face and extremities. (21)

In 1903 Spinalonga was transformed into a leper island with 250 patients from Crete. Following Crete unification with Greece in 1913, more patients were brought even from abroad and it was classified as an International Leper Hospital. Spinalonga was one of the last active leper colonies in Europe until 1957 when the disease became curable. The last inhabitant, a priest, left the island in 1962. This was to maintain the religious tradition of the Greek Orthodox Church, in which a buried person has to be commemorated at following intervals of 40 days; 6 months; 1 year; and 3 years after his/her death. (22)

## CHOLERA

Cholera caused hundreds thousands of deaths, in 1817, 1820, 1853-1854, 1865, 1883, 1893, and 1912-13 in Greece. The largest cholera epidemic was that of 1853-1854, brought to Piraeus by the French troops, who occupied Athens and its port to prevent the participation of Greece in the Crimean War. The disease spread to Athens and then all over Greece, to Larissa, Syros, Nafplion, and Mykonos. The writer Emmanuel Lykoudis called it a short story of the "International 1854". People fled to the villages to save themselves as doctors could offer no aid, the media of that era were rudimentary and the state was paralyzed. All rested their hopes in God and they prayed with Neophytos, the Archbishop of Athens, for the extinction of the disease. (23)

Cholera appeared again during the Balkan Wars (1912-13) when Greek soldiers met with the already infected Bulgarian troops in Macedonia and Thrace. It did not take long for the disease to spread through the outskirts

of the cities. However, the health authorities were able to limit its spread by organizing a double vaccination of about 100,000 people. (24)

## DISCUSSION

Epidemics occur mostly during wars, hunger, poverty, and physical disasters when people are obliged to live under unhealthy conditions and without medical assistance. Efforts to cope with diseases should always be made even if the available means are inadequate.

During the 17th and 18th centuries, the Venetian administration took successful measures to combat plague on the 4 Greek Ionian Islands, Corfu (Greek name Kerkyra), Zante (Zakynthos), Kefalonia, and Lefkada, incorporated into the Venetian State in 1386, 1485, 1502, and 1684, respectively and until 1797. (25)

In contrast, on mainland Greece, which was under Ottoman rule, the plague continued to cause epidemics during the first half of the 19th century with devastating demographic and financial consequences. (26)

Archival sources - the Venetian state archive (Archivio di Stato di Venezia) - show that the most cases of plague on the Ionian Islands during the 17th and 18th centuries were imported from the neighboring coast of mainland Greece and ports in the southwestern Ottoman Empire. Only two epidemics were imported from the trade routes of the Mediterranean Sea. During the 18th century, plague had waned despite an outbreak along the southwestern coast of the Ottoman Empire, a short distance from the coasts of the Ionian Islands. Only 14 plague-free years are described for the Greek peninsula during the 18th century. (8, 27)

The Venetian State, being a pioneer in organization of public health services conceived in the late Middle Ages, established regulations and practices in the city of the Doges and its conquests. All practices were based mainly on the belief in the miasmatic and contagious nature of plague. Scientific information about the cause of plague was not obtained until the end of the 19th century, through laboratory research conducted by Alexandre Yersin (28).

The regulations included quarantine (period of isolation ensured by military force, ranging from 14 to >40 days and occasionally even longer), *lazarettos*, public health offices, and *cordoni di sanità*, coastal garrisons that controlled access to Venetian territories (29)

The first *lazarettos* were established in Corfu and Zante in 1588 and in Cephalonia and Leukada at the beginning of the 18th century. The residents

were separated by the health authorities into the groups of healthy and sick persons regardless of social hierarchies. When there was evidence or even suspicion, by an information network of daily reports of Venetian consuls in Mediterranean areas to Venetian authorities, that plague was present on an island, all links to Venice were immediately discontinued for the duration of the threat. (30)

The efficacy of measures taken by the Venetian government during plague epidemics became apparent in Corfu where plague was eradicated after 1673, only to reappear during the British rule in the early 19th century. (31)

In contrast to measures taken on the Ionian Islands during the 17th and 18th centuries, mainland Greece, which was under Ottoman rule, had a different mentality in dealing with plague. Isolation of patients and quarantine were not common practices.

After 1830, when the Ottoman administration implemented sanitary measures such as quarantine, the spread of plague in mainland Greece decreased substantially. (31)

In Crete until 1717 the lepers moved freely, but thereafter, because of the pressures on the local Turkish authorities, they were gradually isolated in a small suburb west of Heraklion, which was named Meskinia (a village of lepers). Later Spinalonga Island was established as an International Leper Hospital. (22, 32).

During the Balkan Wars (1912-13) the health authorities were able to limit the spread of cholera epidemic by an extensive vaccination of people. (24)

## CONCLUSIONS

Epidemics are a great problem with severe consequences for many people, states and the whole world. Wars and poverty are the main agents who favor diseases to emerge.

In spite of this, even in the absence of adequate measures and scientific knowledge during epidemics, simple measures, such as close observation can effectively restrain infectious outbreaks and even make them disappear.

## REFERENCES

1. Lamsides O. Michael Panaretos on the Grand Komneni, (in Greek) Athens, Researches on Pontos 2, 1958, p. 68.

2. Hunger H. Johannes Chortasmenos (ca. 1370 - ca. 1436/37). Briefe, Gedichte und kleine Schriften. Einleitung, Regesten, Prosopographie, Text, Wien, C. H. Beck'sche Verlagsbuchhandlung, 1969, p. 177.
3. Lambros S. Brief chronicles, Athens, Academy of Athens, 1932, p. 14 (in Greek).
4. Mertzios D. The Archives of Epirus in Venice. *Chronicles of Epirus*, 1936, 11, 59.
5. Gottfried R. S. *The Black Death*. New York: The Free Press; 1983.
6. Herlihy D. *The Black Death and the Transformation of the West*. Cambridge (MA): Harvard University Press; 1997.
7. Lambros S. Turcica. Institut de turcologie, Université de Strasbourg. Institut d'études turques, Association pour le développement des études turques 1998 Éditions Klincksieck. p. 198.
8. Kostis K. The time of the plague. Images from the societies of the Greek peninsula, Heraklion, University of Crete, 1995, pp. 301ff. (in Greek).
9. Nikolopoulos. H. J. Structures and institutions in the Turkish occupation, Ampelakia and the socioeconomic transformation of the Greek territory, Athens 1988, p. 236, 237, 328 (in Greek).
10. Simopoulos K. Foreign travelers in Greece. Athens 1984, vol. Γ2, p. 293, 469(2), 148 (4), 357, 470, 43, 389 (in Greek).
11. Pouqueville F. *Travel in Greece, Epirus*. Athens 1994, p. 259.
12. Archives de la chambre de Commerce de Marseille A. E. B' p. 904-906.
13. Reisinger E. Griechenland Schilderungen Deutscher Reisender. In zweiter veränderter Auflage herausgegeben. Mit 90 Bildtafeln, davon 62 nach Aufnahmen der Preußischen Messbildanstalt, Leipzig, Insel-Verlag 1923.
14. Kohn G. C. *Encyclopedia of plague and pestilence: from ancient times to the present*. Infobase Publishing 2008, p. 31.
15. Kostis K. P. In Search of the Plague. The Greek peninsula Faces the Black Death, 14th to 19th Centuries. *Acta Hisp. Med. Sci. Hist. Illus.* 1998 (18), p. 465-478.
16. Odorico P. *Conseils et mémoires de Synadznos pritre de Ser& en Macédoine (me siicle)*, Ed. de l' Association «Pierre Belon» 1996.
17. Timonis E., Pylarinos J. Smallpox Inoculation. *J Med Biogr* May 1997, 5 (2), p. 122-123.
18. Montagu Lady M. W. *Oxford Dictionary of National Biography*, Oxford University Press, 2004.
19. Herbert C. People with leprosy (Hansen's disease) during the Middle Ages. *Social Science Journal* 2001:38 (2), p. 315-321.
20. Hugh C. Tournefort J. P. *'Encyclopaedia Britannica 27, 11<sup>th</sup> ed.* Cambridge University Press, 1911.
21. Gye H. Inside an abandoned leper colony: Haunting images of the asylum where disfigured sufferers were sent to die on Greek island. Lovokomeio leper colony on the island of Chios opened in 1378 but has long been abandoned. 2013.
22. Darby B. Spinalonga-Paradise or Purgatory? *The Star*, 1986 46(1) p. 6-16.

23. Badem. The Ottoman Crimean War (1853-1856) 2010, p. 183.
24. Friedrich Prinzing. Epidemics resulting from wars. Ed. by Harald Westergaard. Published 1916 by Clarendon Press, H. Milford in Oxford, London, New York (etc).
25. Kairofylas K. The Ionian Islands under the Venetians [in Greek]. Athens (Greece): G.P. Xenos; 1942.
26. Konstantinidou K. Mantadakis E. Falagas E. M. et al. Venetian Rule and Control of Plague Epidemics on the Ionian Islands during 17th and 18th Centuries. *Emerg Infect Dis.* 2009 15(2): 39–43.
27. Konstantinidou K. The disaster creeps crawling. The plague epidemics of the Ionian Islands [in Greek]. Venice (Italy): Hellenic Institute of Byzantine and Post Byzantine Studies; 2007, p. 55–203.
28. Biraben J. N. Les hommes et la peste en France et dans les pays Européens et Méditerranéens. 2. Les hommes face à la peste. Paris: Mouton; 1976.
29. Palmer R. J. L'azione della repubblica di Venezia nel controllo della peste. Lo sviluppo della politica governativa, Venezia e la peste 1348–1797. Venice (Italy): Marsilio Editori; 1979, p. 105–7.
30. Concina E. Lazzaletti degli 'stati da mar', Venezia e la Peste 1348–1797. Venice (Italy): Marsilio Editori; 1979, p. 178–84.
31. Panzac D. La peste dans l'empire Ottoman 1700–1850. Louvain (Belgium): Peeters; 1985.
32. Sieber F.W. Reise nach der Insel Kreta im griechischen Archipelagus. Leipzig 1823.

## SAŽETAK

*Posljednjih su stoljeća razarajuće za Grke bile epidemije kuge, boginja, gube i kolere. Godine 1816. kuga je pogodila otoke u Jonskom i Egejskom moru, kopnenu Grčku, Konstantinopol i Smirnu. Mlečani koji su vladali Jonskim otocima uspješno su se borili protiv kuge, za razliku od Osmanlija koji su upravljali ostalim regijama. Godine 1922. kuga se pojavila kod prognanika iz Patra, koje su Turci protjerali iz Smirne i Male Azije. Cijepljenje protiv malih boginja najprije je provedeno u Tesali i izvodile su ga grčke žene, a grčki liječnici Emmanouel Timonis (1713., Oxford) i Jakovos Pylarinos (1715., Venecija) napisali su relevantne znanstvene publikacije. Prva kolonija gubavaca otvorena je na otoku Chiosu. Na Kreti je Spinalonga pretvorena u otok gubavaca koji je nakon rata za nezavisnost protiv turske okupacije i ujedinjenja Krete s Grčkom 1913. bio klasificiran kao Međunarodna bolnica za gubavce. Kolera je pogodila Grčku 1853. – 1854., a donijeli su je francuski vojnici tijekom Krimskog rata i opet tijekom balkanskih ratova (1912. – 1913.) kada su bugarske postrojbe donijele koleru u sjevernu Grčku.*

*Zbog uzastopnih ratova medicinska pomoć nije bila uvijek dostupna, tako da su se očajni ljudi više puta okretali religiji procesijama u čast lokalnih svetaca, za svoj spas u vrijeme epidemija.*

**Ključne riječi:** razarajuće epidemije; Grčka; novije doba.