

# The Knights Hospitaller of Rhodes and the Black Death of 1498: a poetic description of the plague

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## SUMMARY

The study is a presentation of the sole written testimony of the great plague epidemic that struck the island of Rhodes in 1498, at the time when the Order of the Knights of St. John was settled there. The Greek poem "The Thanatikon (i.e., *plague*) of Rhodes", which was written by Emmanuel Georgillas Limenitis in the late 15<sup>th</sup> century and recounts the terrible events of the epidemic, was used as a source of information. Among the 644 verses of the poem, elements like the place, time, duration and how the epidemic spread can be identified. Within the historical context of the era, evaluation and analysis of the data reveal the correlation between human activities and the physical history of the dis-

ease in the Mediterranean during the 15<sup>th</sup> century. The *Plague of Rhodes* confirms the value of non-medical sources in the medico-historical and historico-epidemiological study of the evolution of the disease caused by *Yersinia pestis* while highlighting an enduring intrinsic weakness of surveillance systems. Despite modern means of epidemiological surveillance, the risk of relaxation of a health system after a long period of absence of an infectious disease constitutes a major factor for future resurgence of the specific disease.

*Keywords:* Order of Knights Hospitaller, Plague, Rhodes.

## INTRODUCTION

Within a few years from the resurgence of plague in the 14<sup>th</sup> century, the disease turned into a pandemic - in terms of modern epidemiology - that changed Europe. Many people were led to believe that humanity had been salvaged because plague was not accompanied by the end of the world. However, the disease did not disappear from the continent and, when the combination of ecological parameters or human interventions was favorable, numerous epidemic outbreaks occurred, resulting in the preservation of the disease in endemic areas and else-

where. Various epidemic outbreaks throughout the 15<sup>th</sup> century, in combination with traditional human activities like population movements, commerce and military campaigns, were bound to highlight the need for societies to protect themselves against this terrible scourge by introducing the most straightforward precautionary measure, namely isolation [1-4]. Nevertheless, isolation in itself was often ineffective, either due to the increased virulence of the microbe or as a result of the negligence, ignorance or relaxation of societies themselves.

The present study discusses the case of a plague epidemic that went down in history as the Plague of Rhodes of 1498, at the time when the island was held by the legendary Order of the Knights of Saint John, which was famous for its pioneer medical work. The aim is to explore the medico-historical and epidemiological accuracy with

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regard to this event with the help of a poem dating from 1500 that describes the epidemic.

### The “Plague of Rhodes” as a primary source

The case of the great epidemic of 1498 is recorded in only one primary source, *i.e.* a poem entitled “The Plague of Rhodes” (c.1500) and written by the Greek scholar Emmanuel Georgillas (c.1445-c.1500). Georgillas was known by the sobriquet *Limenitis*, which derives from the name of a settlement in Rhodes called *Limenio*. The poet supported the Order of Saint John and he was familiar with the idea of a harmonious life and co-existence between the Greek and the Latin population. According to his ideas, the Ottoman Empire as their common enemy was far more important than the theological differences between the Orthodox and the Catholic Church. While the Greek scholars of the Late Greek medieval era mainly wrote using the plural form, Georgillas uses the singular form because he addresses the reader directly. He was an eyewitness of the disaster and as such he felt that it was his duty to inform the readers about the deadly epidemic [5-8]. The poem is written in Greek and has not been translated to another language, while it consists of 644 verses that recount the events surrounding the epidemic [9].

Through his verses, Georgillas provides information about the place, time and duration of the epidemic, as well as on the measures adopted by the Knights in order to contain it. Moreover, he describes the ways in which the society reacted both during and after the epidemic. The “Plague of Rhodes” belongs to a special category of medieval Greek texts that describe historical events in the form of poetry, such as the chivalry poem “Chronicle of Morea” (14<sup>th</sup> century), which recounts the founding of the Frankish Principality in the Peloponnese after the fall of Constantinople in the Fourth Crusade (1204), or “The Catastrophe of Crete” which chronicles the devastating earthquake that crippled the island in 1508.

### A brief history of Rhodes

Rhodes is the capital of the Dodecanese island complex (12 islands) in the Southern Aegean Sea at the Greek-Turkish border. The island has a long history and was a famous cultural and commercial centre already since classical antiquity. The gi-

ant statue of the Colossus of Rhodes was included among the Seven Wonders of the Ancient World. The island also became part of the Byzantine and Roman Empires and functioned as a major trade centre during the Middle Ages. In the 13<sup>th</sup> century it was acquired by Republic of Genoa, whereas in 1309 the island was passed down to the Order of Saint John who ruled Rhodes and the surrounding islands until 1522, when it was captured by the Ottoman Turks.

In 1912, after the war between Italy and Turkey, the Dodecanese became part of Italy. After World War I, Rhodes and the rest of the Dodecanese were ceded to Italy and became the *Isole Italiane dell’Egeo*. After the capitulation of Italy (1943) during WWII, Germany assumed command of the island, which was severely damaged by the British bombings. At the end of the war, the islands were handed to the British until their unification with Greece in 1947. The effect of the architecture dating from the time of the Knights’ and the Italian presence is evident in Rhodes until today. In 1988, Rhodes was designated as a World Heritage Town of UNESCO (Figure 1).

### The medical work of the Order in Rhodes

The Order of the Knights of Saint John was founded in 1099 and officially recognised by a papal



**Figure 1** - The Medieval City of Rhodes. (Source: UNESCO, <http://whc.unesco.org/en/list/493/gallery>).

bull in 1113. The Order had both a military and monastic character and knights from all over Europe were included in its ranks. Its members were divided into Languages or Nations (France, Italy, Provence, Auvergne, Aragon, Germany, Castile, and England).

The supreme leader of the Order was an elected Magister whose title was for life. The mission of the Order members was to oversee the Hospital of St. John in Jerusalem and to provide healthcare to the pilgrims. After the fall of Acre in the Holy Land in 1291, the Order resettled in Cyprus for some time. In 1309 they moved to Rhodes where they remained until 1522, when they were expelled by the Ottoman Turks. After a brief peregrination they ended up in Malta in 1530. Nevertheless, wherever the Knights wandered they never forgot their nursing and therapeutic tradition. The legacy of Rhodes was passed on to Malta, where a larger hospital was constructed and the nursing tradition of the Order was preserved. Even the *Typikon* (namely the statute) of the new Hospital of Malta was based on the operating rules of the Rhodes Hospital.

At this point, it is worth mentioning that the *Typikon* of the Hospital of Jerusalem, which influenced the writing of the *Typikon* of Rhodes, was in turn and to a large extent based on the statutes of the Byzantine and Islamic hospitals of the era of the Crusades [10-11].

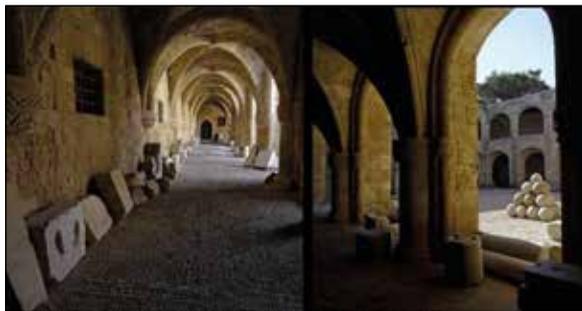
During its stay in Rhodes, the Order organized not only the military defense but also the health system of the island. The most important work of the Order was undoubtedly the Hospital of Rhodes. The first hospital of the Knights is dated around 1311, but gradually the need to create larger premises became pressing. It is estimated that the work of expanding the hospital premises took place between 1335 and 1356. The old hospital (*Vetera Infirmaria*) continued its operation until the 15<sup>th</sup> century [12-13]. The new hospital was essentially a building that replaced the old hospital. Its construction began in 1439 and gradually comprised new wings and extensions proposed by the various Grand Masters. Based on the coat of arms that appears on the façade of the hospital, it appears that its construction was completed in 1483, at the time of the Grand Master d'Aubusson (Figure 2).

The architecture of the hospital is in line with the general architecture of the era and exhibits an



Figure 2 - The Grand Master Pierre D'Abusson (1476-1503).

early Gothic style (Figure 3). The east side of the building is 55 meters long 14 meters high. The sides are simple without much decoration, apart from the decoration of the two pointed Gothic doors. The technique of pointed arches of cathedrals was also implemented in the case of the Hospital of Rhodes. The back side of the building is 65 meters long, while in the interior there is a terrace which is reminiscent of the interior of monasteries. The ground floor of the hospital had low lighting and many storage spaces. On the upper floor, there is a large 51 meters long and 12 meters wide room, where the beds of patients were placed and separated by curtains, along with another 11 rooms which could have been quarantine rooms. The water supply was done from an external source that simultaneously served the cultivation of medical herbs in the hospital gardens [12].



**Figure 3** - The Hospital of the Knights of Rhodes. (Source: UNESCO, <http://whc.unesco.org/en/list/493/gallery>).

The selection of the nursing staff was made by a special committee that examined candidates in theoretical and practical medical issues. The doctors that qualified took an oath towards their patients and adopted a behavior that was reminiscent of a slave to his master, according to the feudal servitude standards (*investitura*), thus considering patients as their superiors and serving them accordingly. The relevant ceremony took place in front of the representatives of the eight Nations. The person in charge of the smooth operation of the hospital was always someone who belonged to the French Nation and bore the title "Grand Nurse". Besides doctors (*medicus fisicus*) there were surgeons (*medicus cyrurgicus*), monk-nurses and various servants and clerks. Beyond the Grand Nurse, other senior offices included the *Hospitalarius* (hospital's keeper), who was responsible for catering to the needs of patients, and the *Aromatarius* (pharmacist). The nurses served for two years and only the Grand Nurses were able to extend their term of office in return for their provision of services to patients. Moreover, the consistency of some people in the difficult role of "servant of patients" was often taken into account and rewarded accordingly. The cases of two slaves are typical examples, namely of Helena from Hungary in 1414 and Jacobinus Armenus in 1421, who gained their freedom as a reward for the diligence that they demonstrated during their work for the Order [14, 15].

Other interesting aspects were the cosmopolitan nursing staff that came from various areas of Europe and mainly the sense of responsibility that characterised the Order members with regard to the health of patients and the provision of ser-

vices to them. In fact, although the Order participated in all major holy wars, the issue of nursing care entails a peculiar moral-ethical code. The case of the Jewish doctor Jacuda Gratiano, "*fiscus et professor artis medicine*", is a typical example, as he was employed in the hospital regardless of his origin and religion. The oath of Gratiano to the representatives of the eight Nations was also exceptional, in the sense that it took place on the basis of Jewish sacred relics in order to secure his ultimate commitment to the oaths of his own religion, thus making a potential perjury of his even more formidable before his fellow believers [14, 16].

Unlike the *Vetera Infirmaria*, the new hospital did not accommodate pilgrims but patients, the war-wounded, poor people and abandoned infants. The doctors of the Order paid particular attention to diet-therapy by promoting an individualised diet for each patient. Surgical procedures were not frequent, where as in line with the general perception of the time the surgeons did not enjoy particular respect by the doctors. A typical example was the injury of Grand Master Pierre d'Aubusson during the Ottoman siege of 1480. His survival was attributed to divine intervention and everybody believed that d'Aubusson was saved by a miracle of Virgin Mary rather than by the efforts of the surgeons.

At the time of Grand Master Pierre d'Aubusson, a health committee was also established which consisted of officials of the Order (*Domini Sanitati*) with the equal participation of two Greeks and two Franks. The aim of this committee was to introduce measures in order to tackle epidemics or other emergency situations. A striking example of the capabilities of the Order was the case of the major earthquake that struck the island of Kos in 1493. The Order immediately sent two galleys equipped with medical personnel and supplies. In addition to helping the victims of the earthquake, the decision makers of the Order, ordered the opening of a channel from the sea to the marshes of the island, in order to clean the area and to prevent possible epidemics after the earthquake [14].

#### "The Plague of Rhodes" (1498)

The poem is written in an early Greek demotic language version of the 15<sup>th</sup> century, enriched with elements and idioms stemming from the

dialect of Rhodes, while it comprises many Hellenised Latin words attributable to the long cohabitation of Greeks and Latins in the island. It is worth noting that the exact translation of its verses in another language is very challenging. The same is also true for a respective effort to translate the poem in Modern Greek language, as it would distort the uniqueness and metrical verse of the poem. Nevertheless, in the present study we are going to present various translated verses of the poem which by no means reflect its great literary merit.

Already from the first verses, the poem clearly describes the place, time and duration of the epidemic:

(ver.1-8)

*Upon the completion of a thousand four hundred  
and ninety eight years  
The island of Rhodes was struck by God-sent death  
and suffering  
And it began in the month October and the lust of  
Death lasted for 20 months  
At the time of the rule of Grand Master Pierre  
d'Aubusson.*

Subsequently, Georgillas introduces himself and addresses the readers by describing the first element of the epidemic, namely the social classes that were affected:

(ver.15-29)

*What in this poem through verses has been written,  
alas! to me  
Was written by Emmanuel whose surname is  
Georgillas and who is known by  
the name Limenitis  
and you, the rulers, the rich, the poor, the old and the  
young  
and you great rulers who lead us  
listen to what this evil has been, this great and terrible  
shame  
that has fallen upon poor Rhodes  
and eaten the people with rabid hunger  
and reaped the Bishop, the priests, the merchants  
and brought sorrow to the elderly and grief to the  
mothers  
to the unmarried girls and to the housewives  
and it broke husbands apart and made children  
orphans  
and made them grow up in the midst of bitterness and  
sadness.*

Georgillas follows a peculiar tactic, as he travels through time and presents the phases and aspects of the epidemic free of chronological order. In an amazing manner, however, the reader essentially understands the story as a whole. His decision to start by describing the burials and picture of the deserted town with its citizens restricted to their houses by decision of the *Domini Sanitati* creates an atmosphere of suspense and agony for the reader. It becomes clear that the epidemic did not discriminate on grounds of age, sex, religion, nationality or social class. Moreover, it should not come as a surprise that the bodies of the deceased were buried outside the town without the Christian ceremonial, due to both the death of priests and the fear of people to attend the funeral, a behavior that was often recorded in various medieval epidemics:

(ver. 36-48)

*Lament and say a word to Rhodes  
Which lives in bereavement and mourning  
alas! My Rhodians, my dear brave men  
and all of you foreigners who were lost, Greeks and  
Franks  
what happened to your youth, what happened to you  
at this age  
your sturdy bodies are now being loaded  
and taken out into the plains, in order to be placed in  
the soil and darkness  
without any prayer with no hallelujah  
you are taken and loaded onto the mules*

(ver. 65-71)

*The relatives and the neighbors shut themselves into  
the houses  
they closed the windows and the doors were  
barricaded  
and the young men and women disappeared and the  
roads were emptied  
and filled with grass and dirt and everything became  
ugly  
and the wicked Death messed all houses  
and yet the others became messed after having been  
shut for so long  
and all the houses were now overseen by the Sanita  
[...]*

As it becomes apparent later in the poem, the persistent reference to the beauty of the island's girls who unfortunately passed away has its own significance in the development of the narration:

(ver. 92-159)

*Weep for and lament the beautiful and unfortunate daughters  
Whose beauty was famous in all the countries  
And I shall speak to you of the beauty of the Rhodian woman  
Because no other woman is comparable to her  
I wish that I could take them out of the soil and lift them to the sky  
since this is where their beauty deserves to be [...]*

Georgillas narrates his personal drama involving the people of his family that were lost, thus providing an indirect demographic perspective, followed by a poetic description of death:

(ver.182-217)

*[...] I do not allow myself to tell you phony words because I myself bemoan and my lips are bitter alas! I lost my wife and children my three sisters and their husbands each of who had children five, six and seven each of them and the sword of Charon took them all and only our mother survived to lift the entire burden of sadness and only me Georgillas and my son Giorgis survived and another two and another three of my sisters' children and I am alive to weep for my bitterness and my calamity [...]  
[...] are you happy now, Death, with all that you have done?  
With having taken all the stylobates of the house and taken the mothers and who are you Death that you no one fear and take the rich away as well and nor the poor you pity and enter into their homes and reap them [...]  
[...] and every one trembles and are cowards in the face of you  
And run away to escape your shadow  
But you with a leap that not even the lion can make you enter into the houses and reap the young, the old and the children  
and from each family you leave only one or two alive to live in sorrow*

After 260 verses that charge the reader emotionally, the poet begins to chronicle how the epidemic broke out in the island and why the first death

was not understood as a sign of the imminent epidemic:

(ver. 265-283)

*And the priest named Tsitzoulas was the first one and he was the first to have been spurred by Death but no one believed it and thus the bad beginning started  
the wicked Death and the bitter evil and you must listen to how it all began when a ship brought it when it moored in the harbor and on it Death was hiding in a sack and there the priest had gone to sell them eggs and Death sprang up and went to kiss him why did he, the unfortunate, do so and also took their clothes  
and so Death entered into his home and took him first and the whole family, and after Death was free he took away the entire neighborhood*

(ver.331)

*And the evil was as infectious as scabies [...]*

The island was unprepared for the epidemic and the doctors were unable to help in any manner. The Order decided to move the patients away from the town and to keep them in a place that would be safe for the rest of the town. Though such a tough decision was finalised to block the roads in the districts where the epidemic had appeared, actually condemned both patients and healthy people to death:

(ver. 289-300)

*[...] and the nostrums of medicine did not help and thus the Master ordered to close down those narrow streets of the town as fast as possible and to take out of the town those who had been torn by the illness and to put them in the cells of monasteries and there to isolate the sick families and married couples and they all cried and screamed and prayed "My Lady, save your people and help us, and you Christ put an end to this  
Outrage, which is righteous, but still take it away from us"*

The persistent reference of Georgillas - in almost 100 verses - to the beauty of the women of the

island whom the men were unable to resist to is eventually explained as the reason behind divine punishment. Rhodes was morally corrupted and received the punishment it deserved. This obviously explains the decisions taken by Pierre d'Aubusson, according to which sex, gambling and believers' donations to churches (both Catholic and Christian) were banned. According to the poem, Pierre d'Aubusson was an outstanding administrator at both the organisational and social level, with the Order giving money to widows and orphans while safeguarding the Hospital by transferring suspected cases outside the town:

(ver. 310-328)

*[...] and he (ordered) that everyone be kept away from  
the women  
and that no one touches them  
and the backgammon, the cards and the dice all be  
thrown into the fire  
and to stop all games that are bad for the soul [...]  
[...] and that the Bishops and Abbots stop temptations  
and that no one gives them florins or ducats [...]  
[...] and he thoroughly thought about everything and  
put into order  
And all of us remember these and which among all his  
many goods can we  
distinguish?  
what he gave to the poor, the widows and the  
orphans?  
and to everyone who was in need on those days?  
And how hard he, the glorious, tried to  
drive the disease out of the Ospitale [...]*

The epidemic ended on 24 June 1500 and Georgillas gives an account of the ensuing situation, by accusing all those who were responsible for the demoralisation of Rhodes. In the following 120 verses, he refers to the two deadly sins of the town, namely greed and prostitution. Equally interesting is the reference to Cato and to the Byzantine physician Oribasius in relation to the proper diet that enables healthy living so as to avoid illness or death. He also accuses the Christians who kill each other while the faithless rejoice and laugh at them, which angers God even more. However, the most important element that emerges from the sanctimonious verses concerns what happened after the end of the epidemic and infuriated Georgillas. It is an indirect demographic element of particular importance for the psychol-

ogy of human masses in the aftermath of a disaster. The town tries to return to normalcy while the widows and widowers start to marry once again. Although Georgillas considers this to be a reasonable development, he is angry because of the fact that the elderly of the island married girls who were several decades younger than them. The poem shows that the elderly became "hysterical" about young widows, not only for sexual but also for various other reasons such as the preservation of their legacy and property, which were at stake. In any case, it is interesting that Georgillas does not blame the young women of Rhodes at any point, but rather turns against the elderly who behaved foolishly and humiliated themselves:

(ver. 372)

*[...] On June 24 ceased the war with Death [...]*

(ver. 395-431)

*[...] I swear on my faith that I am fed up with  
the old men begging for a second marriage  
instead of sitting in a corner and wait to die  
they act as if they were young again  
it would be better if they put their heads in a hole  
and started beating their chests with two stones and  
calling for forgiveness  
their teeth have fallen, their eyes are blurred and their  
beards have turned  
white and still they are acting as if they were thirty  
(years old) [...]*

(ver. 531-575)

*[...] You have been told by philosopher Cato as well to  
stop being gluttonous  
and thus you shall live a long time [...]  
[...] And Oribasius the physician tells you to "eat only  
once a day  
eat to live and do not live to eat like a pig"  
for me hunger is a fine medicine  
since it offers health to the body and the soul  
and do not tell me that the wasteful and the gluttonous  
live a longer life  
because these are the causes of their death and demise  
because drinking leads to prostitution and prostitution  
leads to drinking  
since they are the branches of the same bad root  
Tell me, did you ever see a fire go out with oil?  
Prostitution is the fire and wastefulness is the oil  
and the flesh harms the soul and the soul harms the  
flesh [...]*

Georgillas finishes his poem in the midst of intense emotion and pleads God to protect young George (Giorgis) who survived the terrible epidemic in the future and to absolve him of all his sins:

(ver. 630-644)

[...] *and you, my Christ, who were sold for thirty pieces of silver*

*forgive my son if sins he has a thousand thousands like you forgave the thief when he was dying*  
*Amen*

## ■ DISCUSSION

The past studies of epidemics through primary sources based on eyewitness accounts are fraught with a common problem, namely credibility. This problem is mainly related to the time of writing of the source and to the possible literary excess of the writer. As far as the time of writing is concerned, the sources fall into two groups: firstly, eyewitness accounts and, secondly, accounts that have been written many years after the event took place. The accounts that fall into the second group entail the danger of incomplete descriptions, since the writer may have been unable to bring back the memory of the events or was not even present at the time when those events took place but rather rested on information provided by others. The “Plague of Rhodes” must have been written exactly after the end of the epidemic (c. 1500). It could be argued that Georgillas is a highly reliable source of information: by comparing the “Plague of Rhodes” with other relevant eyewitness accounts, it seems that no excess descriptions are present at any point. Of course, in line with the literary patterns of the era, Georgillas attributes the epidemic to Divine intervention and punishment of the town for its sins, although he unintentionally reveals the actual cause and enduring risk factors of most epidemics, namely the lack of control and timely quarantine of suspected cases. On the other hand, the source does not provide any information on mortality or other demographics, except for indirect hints that could help establish a theory. We assume that this lack of information is exactly the reason why the source can be considered trustworthy. In comparison to other sources,

the poem does not present mortality numbers and thus the usual phenomenon of exaggerating the number of victims is absent. As a result, we are unable to draw safe conclusions regarding the number of deaths. After all, the available demographic data are scant and the only thing that we know for sure is that the town had 10,000 inhabitants in 1310 and 20,000 in 1522 [17]. It should be taken for granted, however, that Rhodes was an urbanised island during the 14<sup>th</sup> and 15<sup>th</sup> centuries, whose population rose gradually. The town had triple fortification and its interior was divided into two unequally-sized parts by an inner wall, namely the *collachium* where the Palace of the Grand Master of the Knights (also known as the *Kastello*) was located, and the *burgo* where the ordinary citizens lived. It seems that the town was suffocating within the walls, as it was overcrowded due to lack of space (Figure 4) [17-18]. Buodelmonti reports that the Greek and Latin population lived together and that mixed marriages were usual among the members of the two doctrines [14]. Unfortunately, the demographic data for the period are fragmentary. According to other available information, 500 Knights and 2,000 militia of the Order defended the town during the siege of 1480, but no relevant data exist regarding the population of the town who fought on their side (Greeks, Latins and Jews). Apparently, the families had many members and based on the number of deceased members of Georgillas’ family, we may make a rough estimate of mortality among the general population. According to the poem, the family of Georgillas comprised 28 individuals. After the epidemic, only eight were alive: Georgillas himself, his mother, his son and five of his nephews/nieces. Out of 20 deceased persons, 13 were children, a figure that is similar to children mortality rates in medieval plague epidemics. In the case of this particular family, mortality rose to 71.4% - nevertheless, based solely on this figure we cannot make generalisations as to the entire population whose mortality rate must have been more moderate.

At this point, the actions of the Grand Master were catalytic. The decision of d’Aubusson to isolate patients and suspected cases and to turn the monasteries of the island into quarantine stations is illustrative of his effort to safeguard the town. The decision to build and isolate part of

the town and the expected death of its inhabitants can be judged in various ways on an ethical basis, but we should not overlook the way of thinking of a military leader like Pierre d'Aubusson. He acted just like he would have done on the battlefield, knowing that he had to choose between sacrificing a few or total disaster. In addition, as a master of strategic planning, Pierre d'Aubusson was aware that the news of the epidemic could be understood as a sign of weakness and incites a new siege by the Ottomans. In fact, mortality may not have been as high, at least in the ranks of the Knights, given the decision of d'Aubusson to board all combatants on galleys that patrolled around the island. He only reserved four galleys from Provence for the defense of the town [19]. Thus, he safeguarded the army against the disease while at the same

time creating a defense zone around the island by waiting for the enemy at the sea, where the Order was at its strongest.

Our source describes an epidemic outbreak of plague at the end of the 15<sup>th</sup> century, *i.e.* at a time when the Aegean islands were continuously struck by epidemics. The case of Rhodes is part of a wave of epidemic outbreaks that swept the Eastern Mediterranean already since the mid-15<sup>th</sup> century. However, the State of the Knights is a distinct case in the sense that, given the increased trade due to its major port that functioned as an intermediate or final destination, as well as its numerous military operations in the Aegean Sea against the Ottomans, one would normally expect that the disease must have been a frequent phenomenon. Nevertheless, this does not appear to have been the case based on our



**Figure 4** - The city of Rhodes in 1490. Konrad von Grüneberg: Beschreibung der Reise von Konstanz nach Jerusalem, 1487. Blatt 20v-21r. ([https://www.bib-karlsruhe.de/virt\\_bib/stpeter\\_pap32/](https://www.bib-karlsruhe.de/virt_bib/stpeter_pap32/)).

known sources so far. In 1348, the island was struck by plague at the beginning of the second pandemic of the Black Death. In fact, the timeline of our sources reveals the course of the disease from the Peloponnese to Crete and Rhodes and thence to Cyprus, *i.e.* along the course of Venetian ships [20]. In 1456-1457, Rhodes and Kos were affected once again, while the disease reappeared on the island 40 years thereafter, in 1498 [21]. Of course, the outbreak of 1456 clearly shows the inadequacies of all systems of prevention of that time, since the infection spread from the capital town to the neighboring island (or *vice versa*) due to the narrow maritime transport routes.

When we compare the incidence of the disease in Rhodes to that of neighboring Venetian Crete, we may draw some interesting conclusions about the healthcare policy of the Order and the safeguarding of public health. During the same period, Crete suffered from numerous epidemic outbreaks. More specifically, the island was struck by the disease 13 times, in 1362, 1364-65, 1375-76, 1388-1389, 1397-1398, 1408-1409, 1411, 1418-1419, 1456-1458, 1462(?), 1465, 1468-1469 and probably on 1489 [20-21]. Despite the close relationship between the two islands, the State of the Knights was affected only once, in 1348. This fact reinforces the notion of the Order's increased vigilance over epidemics and management of suspected cases. The history of epidemics has shown, however, that the worst enemy of the health authorities of every country is their own self coupled with a timeless human characteristic, namely complacency. The interval of 40 years since the previous epidemic perhaps created the false sense of security. Assuming the narrative of Georgillas to be true, the disease started when a priest went on a ship which no one considered necessary to subject to quarantine first. Furthermore, as a result of the late diagnosis, the disease spread rapidly. Nevertheless, the decision of the Order to limit social contacts and to confine the residents to their houses was in itself important for the evolution of the epidemic. Equally important was the fact that the disease did not spread to the other islands in the region that were controlled by the Order. On the other hand, the sealing and supervision of houses by the health officials of the Order reveals the rather diachronic response of every system, namely isolation. The view of the town conveyed by the

poem is strongly reminiscent of the case of London in 1666, with its empty streets and guards patrolling outside the sealed houses.

The accusations of Georgillas concerning the moral decline of Rhodes confirm other historical sources and events. Since the Order settled on the island, it began attacking the Ottomans by following the practice of piracy. In 1437, the construction of the castle of St. Peter at the coast of Turkey was completed, in the area where today's Bodrum is located, wherefrom the Order carried out raids towards the inland. A large number of fortune hunters and mercenaries from across Europe joined the Order and started practicing piracy. However, the Order soon started capturing even Christian ships, mainly Venetian, since several pirates who were in the Knights' service came from the enemy of Venice, the Republic of Genoa [22, 23]. It is worth mentioning that the Venetian archives contain the names of at least ten pirates from Italy, France and Spain who had paralysed trading activities in Eastern Mediterranean on behalf of the Order. Already since 1453, the Venetian ambassador in Rhodes, Paolo Morosini, had stated to Grand Master Jean de Lastic that the Republic of Venice would not tolerate the island being a pirate hideout and plundering Venetian Crete, as much as though the Republic wished to have good relations with the Order [22]. Rhodes was the place where the spoils from raids were sold and the trade of slaves and women flourished. These practices were beneficial to the Order and the residents, whereas the great wealth of the island was also reported by the pilgrims of the time on their way to the Holy Land, such as the Italian Pietro Casola and the German Felix Baber Schmidt [24, 25].

Apparently, Georgillas believed that these activities, along with the sudden wealth, arrogance and profligacy of the people of Rhodes and their attacks against Christians, angered God. Behind such beliefs, however, lies a historical truth that helps identify the possible place of origin of the disease. Since 1495, Pierre d'Aubusson had sent a representative to Sicily in order to invite Christian ships of all nationalities to the holy war that he was preparing. But essentially that was an invitation to every picaroon not only to fight against the Ottomans but also to exercise piracy in the Mediterranean [26]. On the year of the epidemic outbreak, the galleys of the Order at-

tacked all Turkish ships crossing the Aegean Sea and were actually very successful in capturing entire convoys [27].

The galleys returned to Rhodes fraught with spoils, where they re-organised and sailed back into the sea. During that year, however, epidemic outbreaks were recorded throughout Asia Minor, the coastline of which was ravaged by attacks of the Rhodian pirates [28, 29].

Based on these historical data, we may theorise that the military operations of the Order in 1498 were perhaps the ultimate reason behind the arrival of the disease in Rhodes. In any case, it is remarkable that in March and May 1499, namely in the midst of the epidemic and the destruction of the island, Pierre d'Aubusson gave official license to Piero Corso to launch an offensive in the Aegean islands with a "*corsaro berton con bandiere dil re di Franza*" and ordered pirate Arfan to patrol in the east of Crete [30]. Obviously, the Order of the Knights had been taught nothing from the terrible epidemic that had struck Rhodes in the past.

## ■ CONCLUSIONS

The case of the "Plague of Rhodes" confirms the value of non-historical sources in the medico-historical and historical-epidemiological study of epidemic outbreaks of major infectious diseases in the past. Although their content is not purely medical, the sources of this kind offer a wealth of information whose proper evaluation may lead to particular conclusions. The "Plague of Rhodes" is one of the reliable sources of medieval historiography of the Black Death and its analysis helps in understanding the sequence of events that lead to an epidemic. Unfortunately, despite the efforts of medieval societies to prevent epidemics, the inefficiencies of prevention systems are evident across Europe and especially in the Mediterranean area with its dense commercial maritime network. Moreover, a diachronic lesson emerges, namely that even today and in spite of modern means of epidemiological surveillance, the relaxation of a health system after the long absence of an infectious disease is a major factor for its future reemergence.

## Conflict of interest

None

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