

PLAGUE IN MARSEILLE WITHIN 20Th CENTURY**LA PESTE A MARSEILLE AU 20° SIECLE****MAFART Bertrand *, LOUIS Francis Jean**, MATTON Thierry *****

* Antenne de l'Institut de Paléontologie humaine, Europôle de l'Arbois, Département de Préhistoire, Muséum National d'Histoire Naturelle, UMR 5198 CNRS.

** Bureau OMS CDS/CSR, BP 155 Yaoundé, Cameroun

*** Service de Médecine des Collectivités, HIA Le Gouest, BP 10, 57998 Metz Armées

correspondance:

Dr. Bertrand MAFART
160 avenue jacques Olive 83000 Toulon
Tel.fac : 04 94 15 98 27
email: bmafart@aol.com

Abstract

Within 20th century, small plague outbreaks and many sporadic cases were recorded in Marseille. A first small outbreak occurs in a cardboard factory at 1903 (9 deaths, 21 cases). Between 1919 and 1934 132 plague cases had been registered (41 deaths), concerning mainly poor people, without any personal contact with harbor activities in 101 cases (30 deaths). The others sick people were sailor men (21 cases, deaths) and harbor workers (10 cases, 4 deaths). The plague became again anademo-epidemic in Marseille at the beginning of the 20th century with the third pandemy. These resurgence of a disease which the only evocation makes fear involved not easily controlled social and politic reactions but also efficiency medical attitudes.

Key words: Plague, history, outbreak, 20Th century, Marseille

Résumé

De petites épidémies de peste et de nombreux cas sporadiques sont survenus dans Marseille au début du 20^o siècle. En 1903, une épidémie éclata parmi les ouvriers d'une cartonnerie (21 cas, 9 morts). De 1921 à 1934, 132 cas furent déclarés et entraînèrent 41 décès : 21 cas parmi les marins des navires arrivant ou mouillant au port ; 10 cas (4 décès) parmi le personnel travaillant sur les quais. La majorité des cas (76,5%) ont été décrits en ville, chez des habitants sans contact personnel avec le port (101 cas, 30 décès).

Ainsi, la peste redevint anadémo-épidémique à Marseille au début du 20^o siècle. Les réactions sociales et politiques furent parfois excessives, témoignant de la charge émotionnelle de la peste pour les habitants de Marseille mais les réactions des acteurs médicaux furent bien adaptées.

The epidemic of plague of 1669 in Paris and 1720 in Marseilles are often quoted as the last epidemic outbreak of plague in France. However, at the beginning of 20th century, small epidemics and many sporadic cases were recorded particularly in Paris and Marseille. At that time, the third pandemic had ever carry on plague from Asia to the whole world. The entire harbor was faced to plague and strict medical control was used, especially in Marseille. From 1845 to 1900, harbor medical staff diagnosed no plague. In 1900, 6 cases (no death) and 1901, 31 cases (4 deaths) were reported aboard ships coming from China, Egypt, Italy but the town was trusting their quarantine framework. So the first re-emergency of plague inside Marseille, in 1903 was a great surprise and cause for anxiety to local council and even, to national health authorities.

1.1 A sporadic plague: the outbreak of the cardboard factory of Saint-Barnabé district of 1903

At the end of August 1903, several deaths occurred among the workmen of a cardboard factory in city suburbs, at Saint-Barnabé district, which sorted old papers from Syria. Previously, rats, usually very many numerous in the factory, had disappeared and many rats corpses had been incinerated by the workmen. September 3Th, a doctor noted the presence of bubo among two patients. The analysis of the pus imposed the diagnosis of plague. Most of patients were factory workers or parents of them. Suspects and subjects contacts (27 people) were hospitalized at the Salvator Hospital on September 6Th with a rigorous bulk heading (Pons, 1904). An antiplague serum was injected to the patients and the antiplague vaccine was injected to 300 people, contacts and paramedical and medical personnel. The use of special garments (overall of fabric and Wellingtons) was imposed to paramedical and medical personnel. A sterilization with the drying oven of clothing was carried out. In spite of these

precautions, three cases occurred among the personnel of the hospital. On the whole, 9 people died among 21 patients, 18 contaminated downtown, three at the Salvator hospital that was opened from September 6th to October 15th. This epidemic of plague in Marseilles was held secret and the national medical authorities sent the general inspector of Health to take the direction of prophylactic measurements. A disinfection of the buildings, houses of the patients and suspects was undertaken. The cardboard factory burned during the disinfection, which fire was recognized as voluntary in 1921. On September 11th, a short article was published in the local newspapers " le Semaphore Marseillais" describing some epidemic pneumonia. The name of plague was not quoted but the rigor of the prophylactic measures was described with insistence. On next page, it was indicated that a cardboard factory had burned in Saint-Barnabé without any apparent link between this two facts. In the « Illustration », a famous national weekly magazine, at date of September 19th, a short article was published indicating that some cases of plague had occurred in Marseilles and that the cardboard factory had burned during operations of disinfection. From this date, the Marseilles newspapers relayed the authorities of the city that denied formally the existence of case of plague, the legitimacy of the quarantine measures ordered by the other countries, regarded as a means of illegitimate economic fight. This misinformation lasted until the end of harbor quarantine measures that were actually exaggerated for a localized epidemic that will have made probably less than seven dead. In 1913, a new case of plague was declared in the rebuilt factory.

1.2 An anademo-epidemic plague: Marseilles from 1919 to 1934

From 1919 to 1929, 132 cases of human plague were declared and involved 41 deaths (Codaccioni, 1920, Foucart, 1934, Gugliémi, 1931, Placidi, 1921) (Tab. 1, fig. 1). The harbor survey was rigorous. There were 21 cases of plague (7 deaths) diagnosed among the sailors of the ships arriving or being at anchor (fig.2, 3) . The employees working on the quays were

exposed as well as the various trade associations, which approached the cargo warehouses (10 patients, 4 deaths). However, the majority of the cases of plague were described downtown among patients not having any relation with the port (101 cases, 30 deaths). These patients lived the unhealthiest districts of the city, at a few hundred miles from the port (Villette and Arenc district). In this part of town, where houses like a shantytown had no hygiene, occupied by poorest people, the rats were abounding (fig 4).

The epidemics generally began in a house or a slum. A person died with hot fever and some days later, others family members and neighbors were also ill and died. This numerous deaths revealed to the medical authority an « suspect disease ». The doctor, the mortician's assistants were sometimes contaminated before the diagnosis was disserted. The diagnosis was never revealed in the press and medical measurements were taken to seek the contacts, to insulate them and seek the presence of sick rats in this district. The control of the murine bearing of the bacillus and the population of *Xenopsylla cheopis* was carried out since the beginning of the century by a laboratory dependent on the municipal Hygiene control. The captured or dead rats found in the port were sometimes infected. The presence of *Xenopsylla cheopis* was found among 92,7% among the rats captured on the ships, 33% among those of the quays and 50,4% among the rats captured downtown on a total of more than 9000 chips examined in 1908 and 1909. Greatest epizootic was observed downtown in 1930: 28 among 42 infected rats discovered during the year in Marseilles among total amount 7275 examined rats came from the same district (table 2). Measures of fight against the numerous rats were ineffective in these social context of intense misery, in spite of spectacular actions of expulsion and disinfect ion carried out with help of police force, the prevention was prioritized with an obligatory vaccination for the employees of the quays and their doctors (1694 vaccinations done in 1930) and the fight against the rats (fig. 5). The fear of the carriage by the rags and the social rejection of the ragmen resulted in setting fire to contaminated houses and deposits

of rags (1919,1920,1922,1930), to prohibit the " flea market ", to regulate the trade of the rags. The paradox of a dissimulation of information in the local and national press whereas all these cases were notified to the International Office of Hygiene ended up in 1903 at the disputes by the city of measurements of control abroad of the ships coming from Marseilles. Only an importation by sea was admitted to, in contradiction with the epidemiological facts. The anademo-epidemic nature of the cases of plague in Marseilles was always denied with force but was probable. As in other areas of the world like the United States, the development of the maritime transport at the end of the 19th and the beginning of the 20th century involved the dissemination of rats contaminated which reintroduced *Yersinia pestis* in the ports of the westernized countries. The abundant rat population in the poor districts lodged the germ that only disappeared with the reduction of this population by improvement from hygiene of the city. The systematic bacteriological control of the rats trapped by the services of hygiene of the city of Marseilles ceased only twelve years ago, testifying so the fear of authorities.

1.3 Epidemiological data

The 1903 outbreak was a focal one and is not very informative. The other ones, from 1919 to 1934, provide clear data about epidemiological situation in Marseille at that time.

Most of cases concerned adults (75,6%). The mortality was 18 % for children and 19 % for adults. In the adult group, the mortality was lower for urban people (sailors: 33%, harbor workers: 40%, urban people: 27%) The highest mortality for harbor workers has several explanations: a later diagnosis for these very poor people without easy medical care access and the fact that they were often isolated case or first case, directly contaminated by rodent fleas on the quays. Even if most of urban people was living without hygiene, several cases of plague in that group was secondary ones, and the diagnosis was made rapidly by council medical staff surveying relatives and neighborhood around the primary case.

This re-emerging plague in Marseille cannot be considered as an endemo-epidemic disease but as anademo-epidemic one. It is clearly proved that *Yersinia pestis* was present in urban murine population, contaminated for a long time by infected rodents living on harbor. So, at several time, in city areas were poverty allowed rodent increase, some sporadic bubonic plague human cases could occur with a secondary small outbreak, intensified by lack of hygiene and human fleas. The quick and strong medical and council reaction, based on and serotherapy and vaccine for ill people and contacts and destruction by fire of the supposed source, allowed a control of the outbreak.

1.4 CONCLUSION

The plague became again endemo-epidemic Marseilles at the beginning of the 20th century. Probably reintroduced within the rat population at this period of rise of maritime and river exchanges, it concerned mainly the inhabitants of the poorest districts without any personal contact with the harbor activities. The frequent dissimulation or the late revelation of the diagnosis by the officials of the reached cities, testifies a will not to worry the population, as well as a fear of the economic consequences of prophylactic measures. The presentation of the poorest, the marginal, the foreigners like persons in charge, is a timeless reaction of the societies facing to the Plague. The prophylactic measures were effectives but often excessive, at a time where the epidemiological chain of the disease was perfectly known and International Conventions existed. Facing to a resurgent disease with strong emotive load such a the plague, specially in Marseille, two century after the Great Plague, the actors of health have always had large difficulties in maintain the debate on a strict scientific level.

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Figure 1. Number of case of plague declared in Marseille from 1919 to 1934

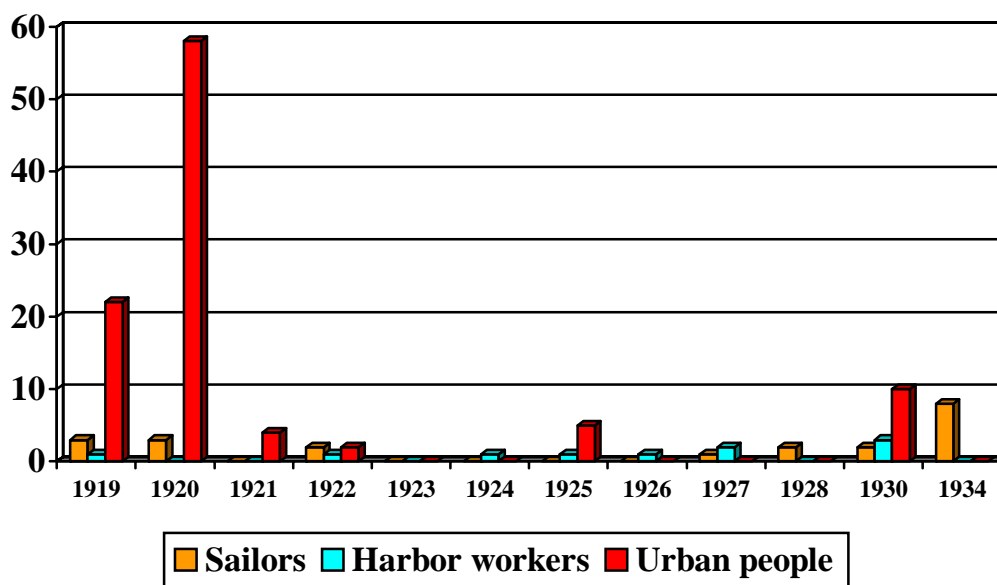


Figure 2. Number of plague cases in Marseille from 1919 to 1934 according to social situation



Figure 3. La Joliette quay in Marseille, where worked most of the harbor workers (post card, beginning of 20th century)



Figure 4. Example of poor district in Marseille where a plague outbreak had occurred in 1921.



Figure 5. Notice put up by Marseille town council to encourage to rodent destruction. A clear allusion is made to the memory of the 1720' plague outbreak (by courtesy of Marseille municipal Record Office) .

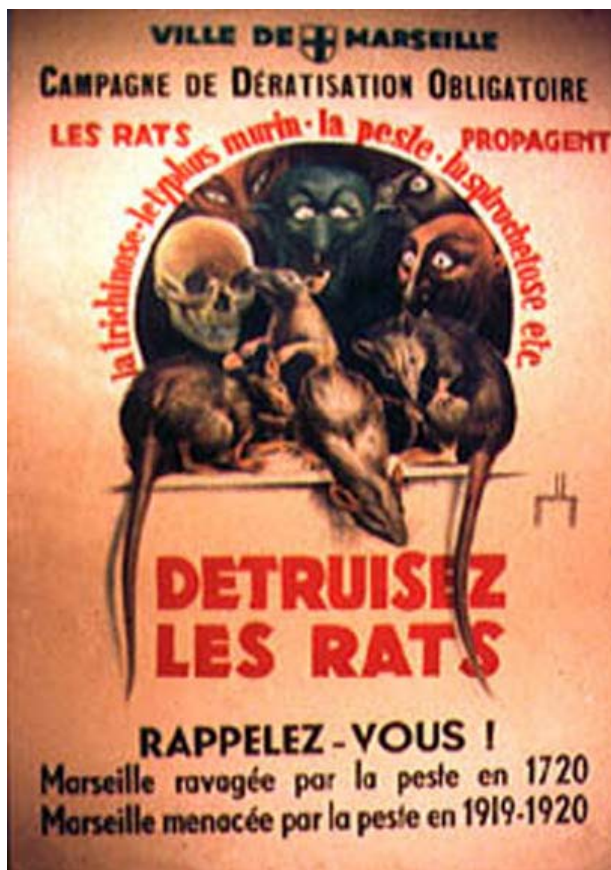


Table1 Cases of Plague on sailor men, harbor workers and urban people in Marseilles between 1919 and 1934

Patients Gravity	Sailor men		Harbor workers		Urban people	
	Sick	Dead	sich	dead	sick	dead
1919	3	1	1	0	22	2
1920	3	0	0	0	58	25
1921	0	0	0	0	4	1
1922	2	0	1	1	2	1
1923	0	1	0	0	0	0
1924	0	0	1	0	0	0
1925	0	0	1	1	5	2
1926	0	0	1	0	0	0
1927	1	0	2	0	0	0
1928	2	1	0	0	0	0
1930	2	1	3	2	10	0
1934	8	3	0	0	0	0
Total	21	7	10	4	101	30

Table 2 Years with presence of infected rats with *Yersinia pestis* in Marseilles between 1919 and 1930 (I.R. infected rats present, 0: no infected rats).

Years	On ships	In harbor	In town
1919	I.R.	0	0
1920	I.R.	0	0
1921	0	I.R.	I.R.
1922	0	I.R.	I.R.
1923	0	0	0
1924	0	I.R.	0
1925	0	0	0
1926	0	0	0
1927	0	I.R.	0
1928	0	I.R.	0
1929	I.R.	0	0
1930	I.R.	I.R.	I.R.5 per thousand