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*Dealing with the Historical,
Epidemiological, Clinical, Therapeutic and
Preventive Aspects of the Disease*

W.J. SIMPSON



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A
TREATISE ON PLAGUE
dealing with the Historical,
Epidemiological, Clinical, Therapeutic
and Preventive aspects of the
Disease

by

W. J. SIMPSON,

M.D. ABERD., F.R.C.P. LOND., D.P.H. CAMB.

Professor of Hygiene, King's College, London ; Lecturer on Tropical Hygiene,
London School of Tropical Medicine ; formerly Health Officer, Calcutta ;
Medical Adviser to the Government of Cape Colony, during the
Outbreak of Plague in 1901 ; Commissioner for the Colonial
Office to Inquire into the Causes of the Continuance of
Plague in Hongkong

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TO ALL THOSE
WHO ARE ACTIVELY INTERESTED IN PLAGUE
AND ITS PREVENTION THE AUTHOR DEDICATES
THIS WORK

PREFACE.

THIS volume has been written at the request of the Syndics of the Cambridge University Press with the object of bringing within a moderate compass the principal facts concerning plague, from its historical, epidemiological, clinical, therapeutic and preventive aspects. Eleven years ago, plague as an epidemic disease was merely of historical interest. Confined to some remote places in China, in India, in Persia, in Arabia, and in Africa, its power was generally believed to be extinct. To-day plague is a matter of concern to many countries and has been the subject of two International Conferences. These Conferences have met, discussed and agreed to the carrying out of measures which, while inflicting the least injury on commerce, might reasonably be expected to protect Europe from an invasion of the disease, and during the past eight years Europe has, notwithstanding one or two alarms, had little reason to doubt that the adoption of these measures has been most serviceable in preventing the permanent lodgement of plague. Europe is however but a small part of the world and other continents have not been so fortunate, and although no great outburst has occurred on the American, African, or Australian Continent, yet there remains the fact that the disease has acquired a lodgement in these and necessitates the greatest vigilance. Plague takes its own time and opportunities for its development, and it is unwise to be lulled into a sense of security by its apparent impotency to spread in a particular country. That it is capable of spreading is seen too plainly in India. Few thought it possible, when plague broke out in Bombay in 1896 after an absence of 200 years, that the disease would not be controlled, checked and stamped out in a short time. It was a rude awakening when the deaths began to mount up to a few thousands to find the old scenes associated with plague epidemics reappear. The closed houses, the

deserted streets, and nearly half of the population of Bombay fleeing panic-stricken from the city, testified to the fact that plague had lost none of its old terrors, and recalled the condition of affairs described in the old epidemics of plague. Later, when, owing to the decline of the epidemic, confidence was restored and the people had in consequence returned, there were congratulations as to the lightness of the attack compared with the mortality in the great epidemics of the past, yet, the next year and every year since 1896, the disease has recrudesced in the city of Bombay, and the number of deaths is fast mounting up beyond the mortality of any epidemic of plague in any single city in the past with the exception of those of Constantinople and Grand Cairo. And still the disease continues. Plague has moreover spread from Bombay to the Bombay Presidency, and from the Bombay Presidency to a large portion of India. Slow in its progress it has steadily advanced; and now the 30,000 deaths from plague which occurred in India in the first year, and which created so much alarm, has reached during the past two years over three-quarters of a million per annum. In 1903 the number of deaths from plague in India was 853,000, and in 1904 it was over a million, being 1,040,429. Of the million deaths in 1904, over 350,000 occurred in one Province. The Punjab is not a large Province; it has a population of under 27 millions¹, or less than that of England, and yet it lost in the course of 12 weeks in 1904 over a quarter of a million of its inhabitants. If in the Province of Manchuria either the Russian or Japanese army now opposed to one another were by some misfortune completely destroyed, the catastrophe would not be greater than what happened to the inhabitants of the Punjab from plague, and if both armies were destroyed it would not compare with the destruction of human life from this disease in India in 1904. These are the official figures, and are admitted to be below the mark on account of concealment on the part of the inhabitants. The total number of deaths in India officially recorded from plague since 1896 was, up to the end of December 1904, three millions one hundred and fifty thousand.

Figures give a very inadequate representation of the amount of misery which plague has brought and is continuing to bring to India. Medical men and other workers engaged in plague epidemics may have some conception of its intensity when they see whole families swept away by the disease, but for most, and for those outside its sphere, it is difficult to realise the full extent of suffering and desolation that has

¹ Census of India 1901 gives 26,880,217.

Preface

ix

befallen hundreds of thousands of families in India and threatens the homes of hundreds of thousands more.

This plague is for India a grievous calamity; none the less grievous because it is borne with that wonderful fortitude and patience so characteristic of the people of Hindustan, nor is it limited to the physical pain and mental grief in each home, great as they are. Scarcity of labour and loss of trade are beginning to be felt in the provinces worst affected, and it is not surprising that in the Indian papers fears are expressed that if there is no abatement of the disease, portions of the country may have to face “the possibility of large areas of land untilled, of trade and commerce decaying, because the population has died or fled carrying the disease to districts hitherto unaffected¹.” In fact if the plague continues its ravages, as it has every appearance of doing, it will more slowly but as surely produce the same conditions in India as it did in times past in Europe in the earlier pandemics. A statement like this will come as a surprise to most people, for in the newspapers in England there appear weekly bulletins from Hongkong and the Mauritius giving the number of deaths from plague in the colonies in the plague season. The figures never mount up to more than a hundred deaths a week at the most and seldom to half that number. The impression produced by these bulletins is that they represent the total extent of plague in the English dominions, and the statement that in the epidemic season plague carries off its victims in India at the rate of thirty or forty thousand a week is received with incredulity. When it is found, however, to be true, most of those who hear it are appalled at the condition of affairs affecting our greatest dependency, for whose welfare England is responsible and anxious to do everything in its power to maintain in a state of happiness and prosperity.

Adverse critics are to be met with who view the ravages of plague as a blessing rather than as an evil to be overcome by every means possible, whose contention is that plagues are necessary and are Nature’s methods of keeping down an enormous population that would otherwise perish by hunger. It is an easy-going doctrine and saves trouble to those unaffected. It is the reproduction in a more subtle form of an old doctrine held many centuries ago, and which makes strange reading for those imbued with the trend of thought of the 20th century. In the seventh century, according to the records of the Church of Mayo², two

¹ Leading article entitled “Plague administration,” *Pioneer Mail*, June 17th, 1904.

² *A History of Epidemic Pestilences*. By Edward Bascombe, M.D., 1851.

Preface

kings of Erin summoned the principal clergy and laity to a council at Temora, in consequence of a general dearth, the land not being sufficient to support the increasing population. The chiefs (*majores populi*) decreed that a fast should be observed both by clergy and laity so that they might with one accord *solicit God to prayer to remove by some species of pestilence the burthensome multitudes of the inferior people*, “*Omnes majores petebant ut nimia multitudo vulgi per infirmitatem aliquam tolleretur, quia numerositas populi erat occasio famis.*” St Gerald and his associates suggested that it would be more conformable to the Divine Nature and not more difficult to multiply the fruits of the earth than to destroy its inhabitants. An amendment was accordingly moved “to supplicate the Almighty not to reduce the number of the men till it answered the quantity of corn usually produced, but to increase the produce of the land so that it might satisfy the wants of the people.” However, the nobles and clergy, headed by St Fechin, bore down the opposition and called for a pestilence on the lower orders of the people. According to the records a pestilence was given, which included in its ravages the authors of the petition, the two kings who had summoned the convention, with St Fechin, the king of Ulster and Munster and a third of the nobles concerned. Another and similar account of this incident is given in the doings of the Saints of Ireland¹.

Other critics, bearing in mind the opposition and hostility with which the preventive measures introduced by the Government of India in the early days of the epidemic were met by the people, emphasise the political dangers which are likely to arise from any action and which justify the present policy of leaving things alone and only assisting when aid is desired. The force of this argument must always be given due weight when dealing with the people of India, whose mode of thought is different from that of the West. But while admitting this, the fact must not be lost sight of that hostility was largely engendered by the methods adopted, owing firstly to the absence of an organised sanitary service and the consequent employment of agencies for the inspection of houses, repugnant to the feelings of the people, and secondly because of a lack of knowledge of the channels by which the disease spreads and the consequent futility of the methods adopted at much cost and effort for the prevention of the disease. The lack of an organised sanitary service and the lack of knowledge still

¹ *Acta Sanctorum Hiberniae*. Tom. i. p. 601. Lovanii, 1645.

Preface xi

remain, and if hope is to come to India it must be by their removal. It cannot be beyond the power of statesmanship to seek means for averting and ameliorating the sufferings of India, and yet to do so successfully without raising dangers to the well-being of the community or of the Government. Even those who see necessity for caution in the methods of working to save the people from dying of plague in the epidemic season, would probably not object to active measures of prevention during the period of quiescence of the disease, when there is no alarm or tendency to panic. These anticipatory measures could easily be carried out without friction if suitable machinery were there. Elsewhere¹ I have shown the nakedness of India in sanitary organisation, and its inability under present conditions to defend itself against epidemics of any kind. It has no thoroughly trained and fully equipped sanitary army made up mostly of its own people familiar with the ways of its inhabitants. It is now over ten years since this defenceless state was shown to exist, and a scheme sketched out for the organisation of a service for the prevention of disease. Is it too much to suggest that some portion of the large annual surpluses of money, which India is now obtaining by its fiscal policy, shall be devoted to this important object? The maintenance of a well-trained native sanitary service to protect the people of India dying from preventable disease is as feasible, and from a humane point of view as important, as the maintenance of a well-organised native army to protect the country against an external enemy. It is to be hoped that for the sake of India an organised Public Health Service commensurate with the requirements of the country will be created.

The formation and development of a trained sanitary service, with which qualified women should be associated, will not be sufficient to meet the conditions now existing. There is urgent need for systematic and scientific study of the disease. More requires to be known concerning the mode of spread of the disease in India, and of the conditions which favour its continuance during the non-epidemic periods. On a proper understanding of these depend many of the preventive measures. If rats, insects, fleas, and infected clothes are the chief factors in the dissemination of the disease, there is little need, unless it be for pneumonic

¹ "The Need of a Sanitary Service for India." By W. J. Simpson, M.D. *Transactions of the First Indian Medical Congress*, 1894, and *Indian Medical Gazette*, Dec. 1895.
 "Plague in India." *British Medical Journal*, 1898.
 "An Address on Preventive Work in the Tropics to the Royal Institute of Public Health." By W. J. Simpson, M.D. *Lancet*, 1904.

plague, of resorting to isolation in hospital and segregation camps, which is opposed to the feelings of Hindus and Mahommedans alike. If contaminated food is an important factor in the production of plague, measures to secure purity should be introduced. But all these have to be proved for India. Seven years of golden opportunities have passed unutilised. If the first 18 months in which scientific study and research partly carried out by a scientific committee in India and partly by foreign commissions be excepted, no real and sustained efforts commensurate with the great issues at stake have been made to get to understand the disease and the manner in which it spreads, and no facts of practical value for the prevention of plague have come from India. It seems to have been considered a waste of money to spend 20,000 or 30,000 pounds in studying the disease and its prevention, though twice or three times that amount is but a small fraction of the vast sums spent for the most part uselessly on administrative and executive methods, which, effective enough, perhaps, in a country with a fully equipped sanitary service and when rigorously carried out at the commencement, have proved to be in India with its conditions of no avail.

For preventive work much more light is needed on a subject involved in obscurity, and this can only be obtained by scientific research which shall be regular and systematic in its nature and which shall be closely associated with a skilled and special organisation devoted to plague administration and which shall not be confined to laboratory experiments. Plague requires scientific investigation outside as well as inside the laboratory. Research and administration in this matter need to go hand in hand. Each if worked on its own lines without reference to the other will accomplish but little, and that little is not likely to be of much practical value. In a disease such as plague the efforts of a sanitary service are only likely to be successful when directed into the proper channels by its close association with scientific research both in the laboratory and in the locality affected.

It is unnecessary to dwell on the danger of the disease spreading to other countries or of the serious risk attendant on plague being allowed to spread without understanding the methods by which this happens. An optimistic opinion prevails that the disease will not spread and soon die out in India. This view has been strenuously held from the first and the continuance of the plague with its three million deaths has been a source of disappointment in this respect. Doubtless if held long enough this view will ultimately prove true, but it may not be in this

Preface xiii

generation. This dying out and failure to spread are not in accordance with the history of plague in the past when it has acquired such dimensions as those existing in India, and there is nothing so far as may be judged in the present condition of the world for it to act differently now than formerly. On the contrary, with war in the East, with grave economical and political disturbances existing at present and with unusual seasons, the conditions which in earlier times favoured the prevalence of plague do not appear to be altogether wanting for its expansion in the present age. Whether history will repeat itself or not or whether the risk of extension to neighbouring countries is great or small remains for the future to decide. No one can prognosticate one way or the other. But amidst this uncertainty there is one thing absolutely certain, and it is that owing to this invasion of plague the condition of the people of India in the worst affected provinces is most deplorable. It not only claims the deepest sympathy, but also in the interests of humanity imperatively demands the closest attention and the adoption of suitable and adequate remedial measures for its amelioration and for combating the spread and ravages of the disease.

In conclusion a pleasant duty devolves on me to acknowledge with grateful thanks the kindly assistance given me in writing this book. My acknowledgements are due to the Syndics of the Cambridge University Press for the facilities they have afforded me in its publication. They are also due to Dr Norman Moore and Dr Joseph Frank Payne for assistance and advice; also to Mr W. M. Haffkine, C.I.E., for his microscopical specimens of involution forms of plague bacilli. It is impossible to over-estimate the splendid services which have been rendered to India by Mr Haffkine by his discoveries of a cholera and plague prophylactic, and by his work carried out in India amidst great difficulties in connection therewith. Such services can never be forgotten. My thanks are also due to Dr Choksy of Bombay and Dr Gregory of Cape Town for the photographs representing plague patients, also to the Colonial and India Office for access to official records; to the Local Government Board for Dr Thomson's translation of the Paris Convention, and to the Controller of His Majesty's Government for permission to reproduce that translation.

W. J. SIMPSON.

KING'S COLLEGE, LONDON,
March. 1905.

CONTENTS.

PART I.

HISTORY AND DISTRIBUTION OF PLAGUE.

CHAPTER I.

PLAGUE FROM THE EARLY CENTURIES TO THE 19TH CENTURY	PAGE 1
Definition.—The antiquity of plague.—Plague in Syria, Egypt, and Lybia.—The first recorded pandemic.—Account of the plague at Constantinople by Procopius.—Account of the plague at Constantinople in 558 by Agathias. Account of the plague at Antioch by Evagrius.—Information scanty concerning other countries attacked.—References to the pandemic by Gregory, Bishop of Tours.—Account of Paulus Diaconus.—Plague in Ireland.—Plague from the 7th century until the Crusades.—General retrocession and quiescence of plague in Europe, Egypt, and Syria for several centuries.—Plague at the time of the Crusades and after.—The second recorded pandemic, later called the Black Death.—Constantinople one of the gateways by which the pandemic entered Europe.—The course of the pandemic as described by an Arabian author.—Pandemic distinguished by its rapid spread and destructiveness.—Guy de Chauliac's description of the plague at Avignon.—Le Baker de Swynebroke's account of the epidemic in England.—Plague in the 15th, 16th, and 17th centuries.—Plague in London in the 16th and 17th centuries.—Recrudescences and epidemic waves from old endemic centres.—Remarkable cessation of plague in Western Europe at the end of the 17th century.—Plague in the 18th century.—Plague in West Barbary.—Plague in the 19th century.—Disappearance of plague from Turkey and Egypt in the middle of the 19th century.—Recrudescence of plague in Arabia, Mesopotamia, Persia, and Benghazi.—Plague in the province of Astrakhan.	

CHAPTER II.

PLAGUE IN INDIA	40
Plague in India.—Plague in the early part of the 17th century.—Plague in the Punjaub.—Plague in Ahmedabad.—Plague in Agra.—Plague at the end of the 17th century.—Plague in the 19th century.—The districts of Garhwal and Kumaon endemic centres of plague in India.	

Contents XV

CHAPTER III.

THE PRESENT PANDEMIC	PAGE 48
--------------------------------	------------

The present pandemic originated in Yunnan, one of the Western Provinces of China.—Topographical description of Yunnan.—Trade routes from Yunnan.—Condition of Yunnan in 1871 as observed by M. Rocher.—M. Rocher's account of plague in Yunnan.—Epidemic preceded by sickness and mortality among rats.—Dr Lowry of Pakhoi gives first medical account of plague in Southern China at Pakhoi.—Plague first appeared at Pakhoi in 1867.—Trade route from Pakhoi to Yunnanfu.—Plague endemic in Pakhoi from 1867 to 1884.—Plague not extinct in adjoining prefecture to that of Pakhoi.—Plague at Mengtze, 1874 to 1893. Plague at Nanningfu and Kwaium in 1893.—Plague at Canton in 1894.—Canton connected with the chief towns and districts of Kwangsi and Kwantung.—Plague in Canton in January, 1894.—Hongkong the largest and most important European possession near Canton.—Plague discovered in Hongkong in May, 1894.—The plague bacillus discovered in Hongkong by Dr S. Kitasato and later by Dr Yersin.—Plague in Macao in April, 1895.—Canton and Hongkong become centres of distribution of plague.—Plague at Bombay in 1896.—Commencement characterised by mildness and slow extension.—Opposition to the adoption of preventive measures.—Progress of the disease associated with the migration of rats.—Height of the first Bombay epidemic in Feb., 1897.—Extension of the disease to the Bombay Presidency and to other provinces in India.—Slow diffusion of the plague.—Severity of epidemics at Dharwar and Poona.—Extension of the plague to other Presidencies.—Gradually increasing mortality from the plague in India.—Extension of the plague from India and China to other parts of the world.—Distribution of plague in different parts of the world.—An endemic centre in Uganda.

PART II.

EPIDEMIOLOGY OF PLAGUE.

CHAPTER IV.

NATURE OF INFECTION	76
-------------------------------	----

Earlier views on the nature of infection.—Discovery of the plague bacillus and the evidence as to its causal relationship.—Morphological and staining characteristics of the plague bacillus.—Cultural characteristics.—Involution forms.—Characteristic growth in bouillon.—Formation of stalactites.—Kitasato's plague bacillus.—The vitality of the plague bacillus.—In different media.—Effect of cold.—Effect of heat.—Effect of sun.—Effect of drying.—Variation in virulence.—Effect of the plague bacillus in animals.

xvi *Contents*

CHAPTER V.	
	PAGE
THE RELATIONSHIP OF EPIZOOTICS TO PLAGUE	96
Rats and mice susceptible to natural plague infection.—Relationship between certain epizootics and epidemics of plague a current belief for many centuries.—Observations of epizootics associated with plague epidemics.—Plague-stricken rats, their appearance and behaviour.—Cats affected with plague.—Other animals affected with plague.—Result of experiments to produce plague in animals.—Experiments by German Commission.—Experiments on animals by Austrian Commission.—Haffkine's experiments.—Wilm's experiments.—Experiments on a large scale carried out in Hongkong in 1902.—Plague in man possibly not infrequently caused by food contaminated with plague infection.—Plague in animals under conditions of natural infection.	
CHAPTER VI.	
DIFFERENT VIEWS AS REGARDS THE ETIOLOGY OF PANDEMICS AND EPIDEMICS OF PLAGUE	130
Some questions related to spontaneity.—Origin of plague long attributed to putrefaction of dead bodies, or to great physical disturbances.—Pariset's theory.—Creighton supports Pariset's views.—Mortality of rats from plague not against Pariset's theory.—Origin of plague attributed to great calamities, cosmic and telluric.—The Black Death preceded by great disturbances in the balance of nature.—Creighton places the origin of the Black Death on the borders of the Euxine or Black Sea.—Considerations showing the difficulty and even the impossibility of now locating the origin of the 14th century pandemic.—Volcanic eruptions are recorded to have rendered plants and herbage poisonous.—Great multiplication of disease germs associated with lean or famine years.—Exceptional meteorological conditions preceded the epidemic of plague in Hongkong.—Scarcity preceded plague in India.—Abnormal season preceded epidemic of plague in Hongkong.—Unusual season preceded epidemic of plague in Cape Town.—Conclusion.	
CHAPTER VII.	
VARIATION IN POWERS OF DIFFUSION OF EPIDEMICS, AND THE EFFECT OF SEASONAL INFLUENCES ON THEM	143
Variation in diffusive powers.—Self-limiting plagues.—The existing pandemic possesses comparatively small diffusive powers.—The danger of existing pandemic.—Plague epidemics and seasonal influences.	
Plague epidemics occur at particular seasons of the year.—Temperature affects the endemicity of plague.—Season a composite force.—Mr Baldwin Latham's analysis of the influence of climatic factors on plague.—The varying condition of the soil and its fluctuating temperature likely to have an effect on microbic and insect life.—The temperature of the air itself not directly influential.—At the end of the plague season infected articles lose their infectivity, but may regain it the following season.—Instances.—The same observation has been made in regard to small-pox and vaccine.—Seasonal periodicity of plague, and seasonal breeding period of the rat.	

Contents xvii

CHAPTER VIII.

	PAGE
VARIATION IN VIRULENCE OF PLAGUE EPIDEMICS	159

Variation in virulence.—Mild epidemic of plague at Astrakhan and Vetlianka.—The Vetlianka outbreak suddenly acquires great virulence.—Early malignity of the Avignon epidemic of 1348, with its pneumonic symptoms followed by a less malignant type.

Different types with varying degrees of virulence may be seen running concurrently or following one another in the same epidemic.—Four different types of plague in the Pali epidemic of 1836.—Five degrees of severity noted in the Marseilles epidemic of 1720.—Three degrees of severity observed in the Russian epidemic of 1771.—An Aura Pestilentie noticed in the Egyptian epidemic of 1834–35.—Three degrees of severity in the Egyptian epidemic of 1834–35.—Sporadic cases of mild plague may precede severe epidemics of plague, or they may bridge over the intervals of epidemics.—The import of glandular swellings before and after plague prevalence.—Presence and absence of certain symptoms in different epidemics.—Extraordinary and coloured sweats in the plague of London.—Plague may increase in virulence if it appears in the same locality in successive years.

Variation in the virulence of the disease dependent on conditions to which the microbe and those attacked are exposed.—Natural immunity.—Plague commits its greatest ravages on people subjected to depressing influences.

White people have a fairly uniform mortality from plague wherever they may be attacked.—Susceptible races may become less susceptible out of their own country.—Susceptibility may vary in the same race in different localities.—Variety of type is seen in all infectious diseases.

CHAPTER IX.

FOSTERING CONDITIONS OF ENDEMICITY AND EPIDEMICITY	176
--	-----

Discrimination between recrudescence and endemicity.—Endemic centres.—Kurdistan.—Kumaon and Garhwal.—Characteristics of the outbreaks.—Poverty of the inhabitants, exceptionally insanitary houses and close association of animals and men.—Dr Francis' description of the houses.—Dr Planch's description of the houses.—Conditions in Yunnan.—Conditions in Assyr.—Fostering conditions of plague prevalence similar in exotic localities to those in endemic centres.—Paris in the 17th century.—Oporto in the 19th century.—Canton in the 19th and 20th centuries.—Hongkong in the 19th and 20th centuries.—Bombay in 1896.—The chawls of Bombay.—The crowded buildings in Mandvi.—The Jains and their indifference to death.—A scene in a Bombay building.—Mortality in the Bombay outbreak of 1896–97 small owing to preventive measures.—The three conditions in city of Bombay observed by experts.—Notes of a morning's inspection in Bombay.—Cape Town.—Plague chiefly a disease of the poor.—A Chinese village.—Macao.—Conclusion.

CHAPTER X.

DIFFUSION AND MODES OF DISSEMINATION	PAGE 194
--	-------------

Plague is transportable, but requires certain carriers for its dissemination.—Plague travels by the most frequented trade routes.—Persons sick or incubating plague carry the infection to other localities.—Healthy persons sometimes carry the infection.—Infection transported and disseminated by infected clothes.—The infection conveyed to a new centre may affect rats before human beings.—Additional risk of extension from an infected locality during the height of an epidemic.—The infection carried long distances in ships.—Transport of infection facilitated by the movements of crowds.—Transport of infection may be by vehicles other than infected persons or infected clothes.—Instances of infection being connected with cargoes and infected rats.—Cape Town.—Mossel Bay.—East London.—Durban.—Osaka.—Rhajpur.—Pisco.—Callao.—Asuncion.—Unsie.—Inland towns sometimes infected by conveyance by railway of rats infected with plague or rat-infected merchandise.

CHAPTER XI.

MODES OF DISSEMINATION IN AN INFECTED LOCALITY	210
--	-----

Pneumonic types of plague infectious.—Septicaemic plague infectious.—Original source of infection in the house of Kaviraj Dwarka Nath in Calcutta.—Bubonic plague not directly infectious.—Dissemination by infected clothes.—Dissemination by infected rats.—Special value attaches to the observations in South Africa and Australia.—Observations in Hongkong.—Observations in India.—The agency by which plague is transmitted from the rat to man.—The flea theory.—In the 16th and 17th centuries cats, dogs, pigeons, and fowls were believed to spread plague.
Ancient belief in the possibility of insects conveying infection.—Plague bacilli detected in ants, bugs, and flies.—The rôle of animals other than rats in the dissemination of plague not judged to be important from existing observations.—The tarbagan (*Arctomys bobac*) subject to an epizootic much like plague.—The disease in man contracted from sick tarbagans.

PART III.

PLAGUE IN THE INDIVIDUAL.

CHAPTER XII.

MORBID ANATOMY AND PATHOLOGY	226
--	-----

Skin.—Lymphatic glands.—External primary buboes.—Veins in the vicinity of the bubo affected.—Internal buboes.—Secondary buboes.—Histological changes in primary bubo.—Histological changes in secondary buboes.—The plague bacillus.—Spleen.—Circulatory system.—Respiratory system.—Liver.—Alimentary canal.—Urinary system.—Nervous system.—Autopsies.—Bacteriological condition.—Histological condition.

Contents xix

CHAPTER XIII.

	PAGE
CHANNELS OF INFECTION	249

Infection through skin direct to the lymphatics.—Power of the bacillus to enter the system through a small lesion in the skin without producing a local reaction at site of inoculation.—Infection through the skin direct to the blood vessels.—Older view is that plague is a general disease, and that buboes are its local manifestations.—Infection through the mucous membrane.—Infection through the respiratory tract.—Mixed infection.—Mode of exit of infection from the body.—The duration of infectivity of convalescents.—Incubation period of plague.

CHAPTER XIV.

CLINICAL FEATURES	260
-----------------------------	-----

Different classification or types of plague.—Plague with and without buboes.—Incubation period.—The benign bubonic or Pestis minor.—The grave bubonic or Pestis major.—Causes of death.—Progress after the 6th or 7th day.—Septicaemic plague.—Pneumonic plague.—Characteristic symptoms.—Symptoms considered in relation to systems affected.—Temperature.—Temperature charts.—Lymphatic system buboes.—Contents and condition of buboes.—Size.—Pain.—Tenderness.—Termination.—Situation.—Inguinal buboes.—Axillary buboes.—Cervical buboes.—Multiple buboes.—The skin petechiae.—Gangrenous pustules or carbuncles.—Nervous phenomena.—Vascular system.—Blood.—Digestive system.—Urinary system.—Respiratory system.—Complications and sequelae.—Eye diseases.—Marasmus and chronic plague.—Pregnancy.—Arthritis.—Concurrent diseases.—Second attacks.—Cases of plague.—Ambulant variety.—Septic and fulminating variety.—An atypical case.—Plague pneumonia.—Dr Manser's illness.—Dr Müller's illness.

CHAPTER XV.

DIAGNOSIS AND PROGNOSIS	306
-----------------------------------	-----

Diagnosis generally not difficult in a typical case of plague.—Bacteriological test.—The serum test.—The absence of lymphangitis.—Chief difficulty arises from the Protean character of plague.—Ambulant plague.—Septic type.—Pneumonic plague.—Influenza and plague.—Tonsillar plague.—Prognosis.—Caution as to prognosis.—Favourable signs.—Unfavourable signs.

CHAPTER XVI.

TREATMENT	316
---------------------	-----

Curative treatment powerless in the most virulent forms of plague.—Treatment of plague in the past.—Bleeding.—The evacuant treatment.—The stimulant and tonic treatment.—Oil friction treatment.—Treatment of buboes.—Cold water treatment.—Suggested antiseptic treatment.—Basis of the present day treatment of plague.—Attempt at specific treatment.—Observations on the

sera prepared by Yersin, Roux, Calmette, and Borrel.—Amoy.—Bombay.—Karad.—Karachi.—Oporto.—Glasgow.—Cape Town.—Natal.—Hongkong.—Brisbane.—Observations on Lustig's serum.—Observations on Prof. Terni's and Bondi's serum.—Observations on Kitasato's serum.—Dosage of serum.—Antiseptic treatment.—Carbolic acid.—Cyllin.—General treatment.—Nursing.—Hygienic conditions.—Medicines.—Local treatment of buboes.—Treatment of carbuncles.—Treatment during convalescence.—Prophylactic measures in an infected house.—Use of disinfectants.—Protective inoculation.—Personal hygiene.—Hygiene of the house.

PART IV.

MEASURES FOR PREVENTION AND SUPPRESSION
OF PLAGUE.

CHAPTER XVII.

MEASURES EMPLOYED BEFORE THE DISCOVERY OF THE BACILLUS . 333

Two periods to be considered.—Preventive measures depend on the views which are held concerning the cause of the disease.—Trespass offerings.—Removal from plague-stricken locality.—Fumigation of the dwellings and attention to diet.—Prayers and processions.—Resignation and fatalism.—Disposal of the dead.—Isolation of the rich.—First preventive measures of an organised nature in Venice in 1348.—First governmental measures in 1374.—Lazaretto established by the Venetians in 1403.—A council of health and quarantine established in 1485 in Venice.—The Venetian system of quarantine.—Preventive measures against extension of plague to other countries.—Measures in Austria and Germany in 16th century.—Educational tracts and pamphlets in 16th century.—Measures in London in 16th century.—First government orders issued in London in Henry VIII's reign.—Orders more severe in the reign of Elizabeth.—Severity of measures in Aberdeen.—Enlightened policy in Edinburgh.—First quarantine station for London established in 1664.—Special plague officials appointed in every parish in London.—Regulations in London against the plague in the 17th century.—Hodges opposed to the shutting up the sick and the well in the same house.—Dr Mead's views in 1720.—Advocacy of the establishment of hospitals and quarantine stations.—Evacuation of infected houses.—Passport system for those wishing to leave infected towns.—First Quarantine Act passed in reign of George IV.—International preventive measures introduced in 1831 and 1838.—Disappearance of plague from Turkey and Egypt attributed to these international measures.—Other causes also at work.—Failure of measures to prevent spread of strong invading epidemics, and the possible cause.—International conferences of European Powers to consider measures of mutual protection against epidemic disease from the East.—New basis for maritime preventive measures adopted at the Vienna Conference, 1874.—Quarantine and sanitary cordons brought into requisition in the Russian outbreak of plague in 1879.

Contents xxi

CHAPTER XVIII.

	PAGE
EXISTING MEASURES AGAINST PLAGUE AFTER DISCOVERY OF	
BACILLUS	354

Measures to prevent importation of plague.

International measures.—Regulations of the Venice Convention of 1897.—Merchandise to be prohibited or disinfected if thought necessary, but not quarantined.—Quarantine on land frontiers abolished.—Quarantine not abolished for certain classes and pilgrims.—The measures agreed upon at the Venice Convention though useful did not stop altogether the importation of plague.—Regulations of the Paris Conference of 1903.—Local measures.—Methods employed for the destruction of rats on board ships.—The Clayton process for the destruction of rats and disinfection of ships.—Strength and properties of the gas.—Precautions to be taken in carrying out the fumigation.—Uses of the Clayton disinfector on board ship.—Disinfection of baggage.—Necessity to be in a state of preparedness.—Local measures to be adopted in anticipation of an outbreak.—Certain principles should underlie the erection of plague hospitals.—Health camps.—Arrangements for disposal of the dead.—Administrative arrangements.—Bacteriological examination of rats.—Destruction of rats in a healthy locality as a precautionary measure.—Methods available for the destruction of rats.—Traps and poison.—Fumigation with Clayton’s apparatus.—The employment of Danysz’ bacillus.—A careful watch on prevalent sickness required, especially in the poorer quarters.

CHAPTER XIX.

MEASURES TO COMBAT AN OUTBREAK OF PLAGUE IN A LOCALITY .	372
--	-----

Preliminary observations as to the hindrances to a locality being declared infected with plague.—Commercial, political, and social forces nearly always range themselves against the first announcement of plague in a town.—Controversies in Bombay, Calcutta, Cape Town, and San Francisco.—Reported cases of suspected plague in Johannesburg.—Rats.—No disease which creates so much alarm as plague.—Firmness and judgment required from the commencement.—Measures necessary at the commencement not suitable when the epidemic is beyond control.—Accurate diagnosis essential and its difficulties.—Plague organisation previously planned to be mobilised.—Notification to be supplemented by visitation of houses and other measures.—Information to householders.—Bacteriological examination of rats.—Outline of a plague organisation.—Duties of the plague organisation.—The most important measures for the suppression of plague.—Segregation.—Evacuation of premises.—Circumstances modifying retention of contacts.—Existing methods of disinfection cumbersome and unsatisfactory.—The newest and best method of disinfecting a house infected with plague is fumigating with Clayton’s apparatus.—To prevent recrudescences.—Fumigation has its limits.—Employment of chemical disinfectants.—Burning and exposure to high temperatures.—Boiling.—Exposure to the direct rays of sun for three or four days.—Sanitation.—Destruction of rats.—Destruction of rats by the employment of the virus of Danysz.—Attenuation and exaltation of virulence of virus.—Manner in which cultures of Danysz’ bacillus were used in Cape Town.—Use of Danysz’ cultures

xxii *Contents*

in the outbreak of plague at Odessa.—Other methods employed.—Symptoms in rats suffering from the Danysz' bacillus infection.—Post-mortem appearances.—Bacteriological examination.—General biological characters.—Staining.—Rapid differential tests.—Confirmatory differential tests.—Acute toxic cases.—Destruction of rats in warehouses, etc.

CHAPTER XX.

PREVENTIVE INOCULATION 402

Haffkine's plague prophylactic based on his cholera prophylactic.—Preparation of Haffkine's plague prophylactic.—Method of inoculation.—Effect of the inoculation.—Results of the inoculations.—Instructions to persons inoculated.—The prophylactic of Lustig and Galeotti.

CHAPTER XXI.

CONCLUSION 410

More precise information required regarding plague.—The facts known and established regarding plague.—The main lines on which enquiry is needed.

APPENDIX I.

Reported deaths from plague in India in 1904, extracted from the official weekly returns 414

APPENDIX II.

THE INTERNATIONAL SANITARY CONVENTION OF PARIS, 1903;
With Appendices, translated by Theodore Thomson, Esq., M.D.

PART I. GENERAL PROVISIONS.

CHAP. I. PROVISIONS TO BE OBSERVED BY THE COUNTRIES SIGNING THE CONVENTION ON THE APPEARANCE OF PLAGUE OR CHOLERA IN THEIR TERRITORY 416

Section I. Notification and subsequent communications to other countries . 416

Section II. The conditions under which a local area may be regarded as infected or as having ceased to be infected 417

CHAP. II. MEASURES OF DEFENCE ON THE PART OF THE OTHER COUNTRIES AGAINST TERRITORIES THAT HAVE BEEN DECLARED INFECTED 418

Section I. Publication of measures prescribed 418

Section II. Merchandise.—Disinfection.—Importation and Transit.—Baggage 419

Section III. Measures at Ports and Land Frontiers 420

Section IV. Measures at Land Frontiers.—Travellers.—Railways.—Frontier tracts.—River-ways 426

Contents xxiii

PART II. SPECIAL PROVISIONS REGARDING COUNTRIES	
OUTSIDE EUROPE.	
CHAP. I. ARRIVALS BY SEA	PAGE 427
<i>Section I.</i> Measures at infected Ports on the Departure of Vessels	427
<i>Section II.</i> Measures regarding ordinary Ships from infected Northern Ports on their arrival at the entrance to the Suez Canal or at Egyptian Ports	427
<i>Section III.</i> Measures in the Red Sea	428
<i>Section IV.</i> The organisation for securing surveillance and disinfection at Suez and at Moses' Wells	431
<i>Section V.</i> The passage of the Suez Canal in Quarantine	433
<i>Section VI.</i> Measures in the Persian Gulf	435
<i>Section VII.</i> Persian Gulf Sanitary Stations	436
CHAP. II. ARRIVALS BY LAND	437
<i>Section I.</i> General Provisions	437
<i>Section II.</i> Turkish Land Frontiers	437
PART III. SPECIAL PROVISIONS REGARDING PILGRIMAGES.	
CHAP. I. GENERAL PROVISIONS	437
CHAP. II. PILGRIM-SHIPS.—SANITARY STATIONS	438
<i>Section I.</i> General conditions applying to Ships	438
<i>Section II.</i> Measures before Departure	440
<i>Section III.</i> Measures during the Voyage	441
<i>Section IV.</i> Measures on arrival of Pilgrims in the Red Sea	444
<i>Section V.</i> Measures for Pilgrims returning home	448
CHAP. III. PENALTIES	451
PART IV. ADMINISTRATION AND CONTROL.	
I. The Egyptian Sanitary, Maritime and Quarantine Board	452
II. The Constantinople Superior Board of Health	453
III. The Tangier International Board of Health	455
IV. Miscellaneous Provisions	455
V. The Persian Gulf	456
VI. International Health Office	456
PART V. YELLOW FEVER 457	
PART VI. ADHESION AND RATIFICATION 457	
APPENDIX I. Regulations	457
APPENDIX II.	459
APPENDIX III. Resolutions	459
INDEX	461

LIST OF ILLUSTRATIONS.

	PAGE
Map of Yunnanfu and surrounding districts	53
Plague mortality in India, number of deaths	73
Plague specimens showing bacilli	80
Involution forms of the plague bacillus	84
Haffkine's stalactites	87
Chart showing the relation of epidemic and epizootic plague	101
Chart showing human plague and rat plague	102
<i>Charts of temperatures of experimental animals.</i>	
Chart I. (Pig)	117
Chart II. (Pig)	118
Chart III. (Pig)	118
Chart IV. (Pig)	119
Chart V. (Pig)	120
Chart VI. (Calf)	122
Chart VII. (Monkey)	123
Chart VIII. (Monkey)	124
Chart IX. (Monkey)	125
<i>Diagram A.</i> Plague mortality in Bombay in first epidemic	147
<i>Diagram B.</i> Duration of epidemics and months of their greatest intensity in different localities	148
<i>Diagram C.</i> Mortality from plague for 1903 in Calcutta, as compared with average of previous five years	149
<i>Diagram D.</i> Showing seasons of the year of the greatest and least exhalation from the ground <i>between 150 & 151</i>	
<i>Temperature Charts</i> pp. 269, 270, 271, 272	
Inguinal buboes	276
Axillary bubo	277
Left axillary bubo with infiltration into chest, shoulder, and arm	278
Cervical bubo	279
Cervical bubo	280
Popliteal bubo	281
Cervical bubo and necrosis on left arm	282
Supra-trochlear bubo and necrosis on arm	283
Right inguinal bubo and necrosis or carbuncle on loin	285
Carbuncle or necrosis	286
Temperature chart of Dr Müller	304
Fig. (1). Disinfection by Clayton system of laden steamer infected with plague	364
Fig. (2). Portable Clayton apparatus disinfecting a house	391

MAPS.

Map of the Bombay Presidency	<i>between 70 & 71</i>
Map of Thana Collectorate in Bombay Presidency	70
Map of Surat Collectorate in Bombay Presidency	70
Map of Sind in Bombay Presidency	70
Map showing course and distribution of Plague in Southern China	<i>between 74 & 75</i>
Map showing distribution of Plague from 1894 to end of 1904	„ 74 & 75