

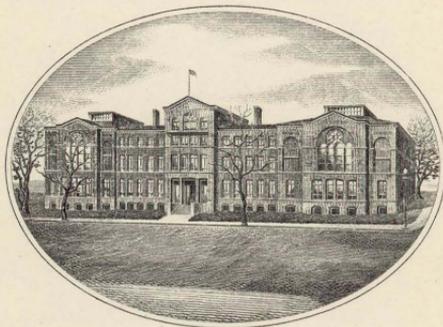
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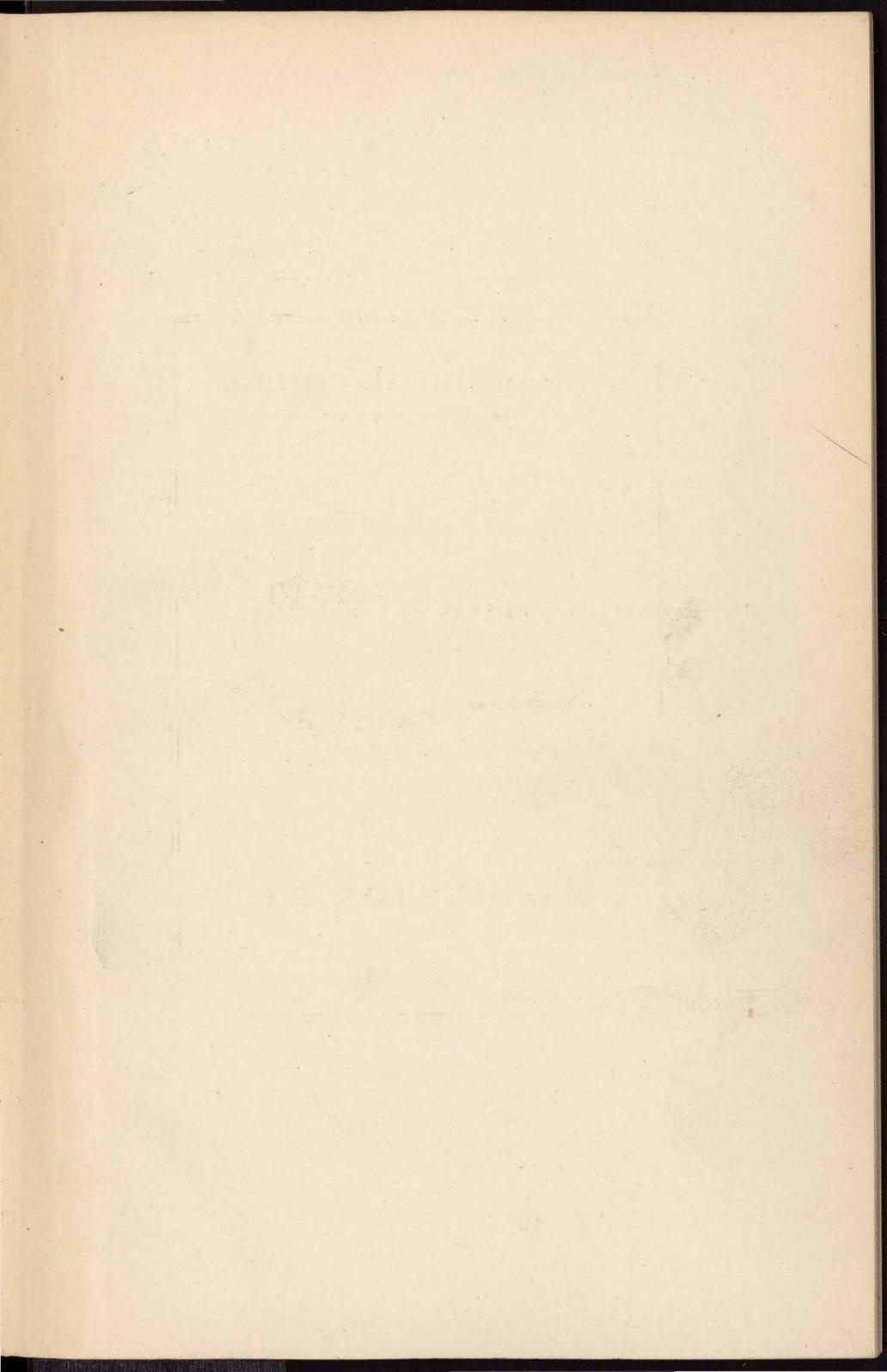
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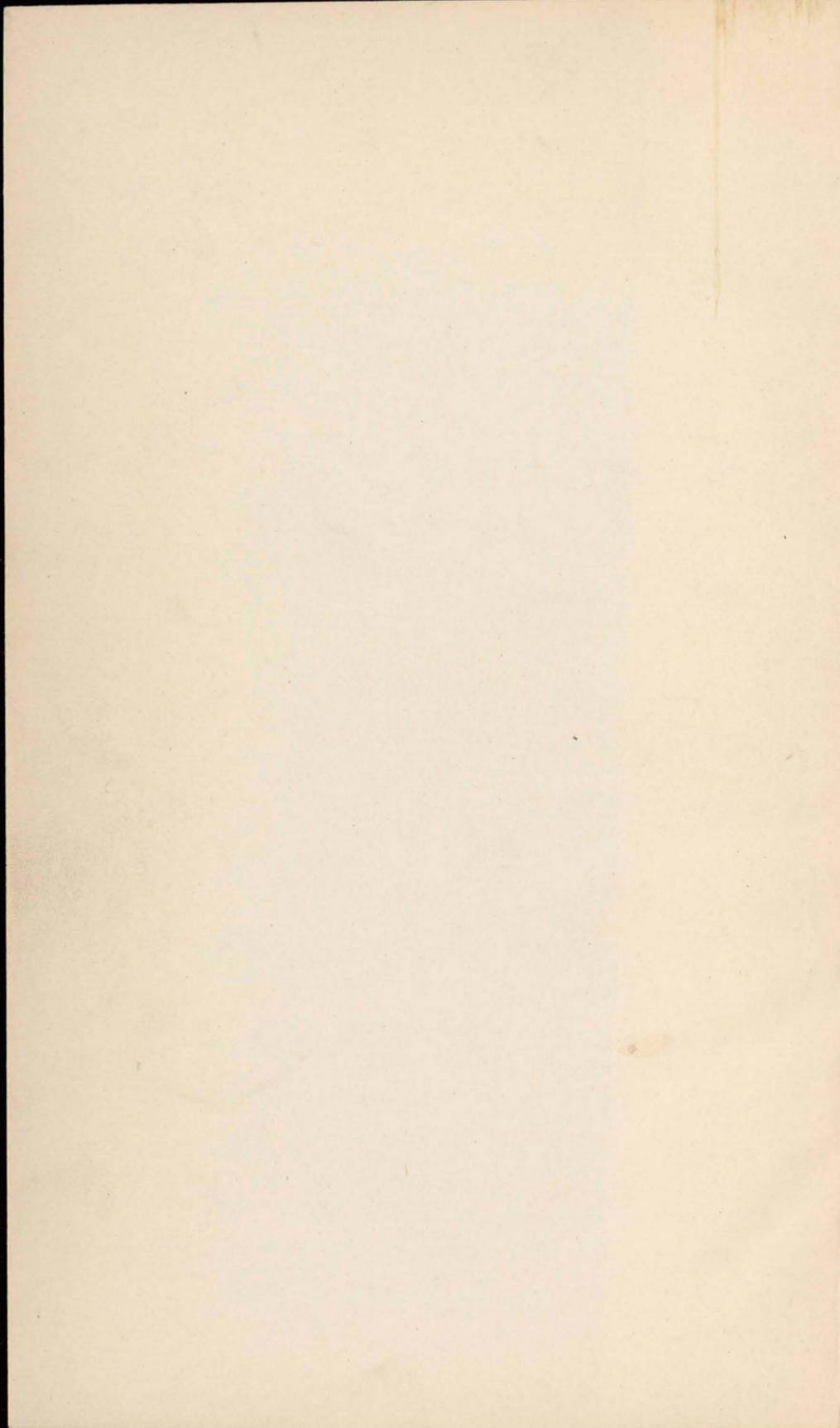
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TREATISE

ON THE

ASIATIC CHOLERA,

GIVING AN ACCOUNT OF ITS

RISE AND PROGRESS; CHARACTER AND NATURE; SYMPTOMS;
PREVENTION; AND METHOD OF TREATMENT.

BY DOCTOR JOSEPH SEAVY.

20,425
Washington, D.C.

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ADVERTISEMENT.

When it was first announced that the Asiatic Cholera had made its appearance on this continent, the author of these pages immediately commenced writing a treatise upon the subject, in order to collect together whatever he thought might be most valuable and useful, respecting the nature, prevention, and cure of this formidable malady.

He handed his pieces, as he wrote them, to a friend, who considered them as containing very important matter, that would be useful to the public. He also submitted the subject to the examination and judgment of others, who all concurred in the opinion of its utility. In consequence of their advice, together with his own views, he has been induced to submit the subject to the investigation of an enlightened public, hoping that, under the Divine blessing, his attempt to avert and mitigate this itinerating pestilence will not prove altogether unsuccessful.

New-York, July, 1832.

Entered according to the Act of Congress, in the year one thousand eight hundred and thirty-two, by Dr. JOSEPH SEAVY, in the Clerk's Office of the Court of the United States, for the Southern District of New York.



TREATISE, &c.

BRIEF REMARKS ON THE RISE AND PROGRESS OF THE ASIATIC CHOLERA.

The Spasmodic Cholera in warm climates has prevailed from time immemorial, at certain seasons of the year. In general, it has been comparatively a mild disease, affecting only a small number of persons, and rarely proving fatal. In the East Indies, however, this disease has prevailed epidemically, at different times, with intense severity. It was not, however, till within the last 14 years, that it particularly attracted the attention of the public, on account of its great mortality and migratory movements. "In August, 1817, it broke out with unprecedented malignity, commencing first among the inhabitants of Jescre, a town 100 miles N. E. of Calcutta. In less than a month it travelled along the course of the river, and then retired for some time to the western bank of the Ganges and Jumna; in Benares, such was its malignity, that 15,000 persons died in two months. Hence it gradually extended north and west to Lucknow, Delhi, Agra, &c. In the army under the Marquis of Hastings, consisting of 10,000 troops and 80,000 followers, it destroyed in twelve days 6,000 men. At this time the thermometer ranged from 90 to 100 degrees.

"The air was moist and suffocating, and the atmosphere a dead calm. The Cholera now directed its course along the Deccan, advancing in many instances at the rate of fifteen or eighteen miles a day. After ravaging many districts, and taking the direction of the coast, it arrived at Bombay in August, 1818, having crossed to the western coast of the Indian Peninsula in twelve months from the date of its appearance in Calcutta. Through the country of its birth it had the same characteristic which it still retains, having a measured rate of progression, with regular halts, and a course sometimes direct and sometimes devious.

"While the interior of Hindostan was thus suffering, the pestilence had spread abroad along the coast of Malabar and Coromandel, reaching Madras the 8th of October. Here it developed a new and still more alarming feature—its capability of being transported by sea; for it broke out in Candia, the capital of Ceylon, in December, 1818, with even greater violence than on the continent. By the 12th of September, 1819, Mauritius was infected, and in December, the adjacent isle of Bourbon. During the last six months of the same year, the epidemic had invaded the Indo-Chinese Peninsula, Siam receiving more than its proportional share of misfortune.

“In Bankoe alone, 40,000 of the inhabitants died. By the end of April it was announced in Java. In 1821 Cochin China and Tonquin were invaded; and in December of that year it entered China at Canton. Peking received the pestilence in 1821, and during that, and the next year, the mortality was so great that the poor were interred at the expense of the government. Returning to Bombay, we must trace its route towards Europe. In July, 1822, through the intercourse between Bombay and Muscat, in Arabia, the contagion was exported to the latter place, where it destroyed 60,000 persons. Many expired in ten minutes after the first attack. Hence it extended to many parts of the Persian Gulf, to Pahrein, Busheer, and Passora, at which latter place 14,000 persons died in a fortnight. From the Persian Gulf the Cholera extended inland in two directions, following the line of commercial intercourse. On one hand it ascended the Euphrates, traversing Mesopotamia into Syria; and the Tigris from Bassora to Bagdat; on the river it made its way into Persia. In Shiroz, in which the population was 40,000, there died 16,000 in the first few days.

“Ispahan escaped in consequence of the caravans being prohibited from entering that city. During several successive years the contagion invaded new countries, or re-appeared in those it had previously scourged. Mosul, Beri, Aentab, and Aleppo were infected; and also Diarbeeker and Antioch. It had thus reached the Mediterranean on one side; it also, in the opposite direction, reached the border of the Caspian Sea. Finally, in September, 1823, it reached the Russian city of Astrachan, at the mouth of the Volga.

“In 1830 it revived in Persia with violence; and crossing the Russian frontier, entered Tiflis, the population of which it diminished from 30,000 to 8,000, by deaths or migration.

“It re-appeared again in Astrachan, and, in penetrating the heart of the Russian empire, pursued the course of the Volga. Between the Cossacks of the Don and Moscow, several districts were ravaged in succession.” In Moscow the appearance of the destroyer was announced on the 28th of September. By the 18th of November, 5,507 cases were reported in that city; and the deaths amounted to 2,908. In January, 1831, the malady had declined in Moscow, but had appeared to a limited extent among the troops marching to the reduction of Poland. On the 18th of March the disease had almost ceased at Moscow. In June, 1831, it made its appearance in St. Petersburg. In 13 days there were nearly 3,000 cases with hardly a single cure.

It gradually spread through the Russian empire till it was officially announced that the whole empire was infected. In the course of this year it visited Berlin and Vienna, and many other places in Germany.

In November, it was transported from the continent to Sunderland in England, and from thence it spread to London, Edinburgh, Dublin, and many other places in the United Kingdom.

On the 30th of March, 1832, 66 cases of Cholera were reported to have occurred in Paris, the capital of France.—From that time, the disease increased in the most appalling ratio. April 6th, 370 new cases were reported; 7th, 509; 8th, to the same hour on the 9th, 1020; and from the 10th to the next morning, 1300. From Paris, the disease spread rapidly in every direction, and in a few weeks made its way into 17 departments of that kingdom.

This mighty pestilence has at length reached our own continent. It appears to have been brought to Quebec in the brig James Carrick from Dublin, early in the month of June.

It has spread to Montreal, Kingston, and many of the smaller towns in Canada. It will no doubt sweep over this vast continent, as it has that of the old world; for no quarantine regulations have been effectual to stop its progress for any length of time. Indeed this seems to be impossible, for the disease is carried by man from place to place, and the travelling of individuals cannot be entirely prevented. A person apparently in health may start from an infected place, and after travelling 50 miles, more or less, may be taken with the disease, and sow the seeds of infection in the place where he may happen to be. This appears to be the manner in which it has generally been carried. In other instances it seems to have travelled in the atmosphere, averaging from 15 to 30 miles a day. This may evidently be the case when a great extent of atmosphere is infected.

CHARACTER AND NATURE OF THE ASIATIC CHOLERA.

It has been the belief of the people of God, in all ages, that pestilence was a special visitation of heaven upon the inhabitants of the earth, for their grievous trespasses.

That the Asiatic Cholera is such a visitation, that it is one of the four sore judgments of the Lord, alluded to in the 14th chapter of Ezekiel, is most strikingly manifest. Who can tell but it is the angel spoken of in the 14th chapter of Revelation, with a sharp sickle in his hand reaping the earth?

For fifteen years past it has been traversing the globe, spreading over vast districts of country, and cutting down great numbers of its inhabitants; crossing seas and oceans, and travelling by land at all seasons of the year, prevailing alike in the heat of summer, and

cold of winter, being subject to no known laws. Sometimes its victim is struck as it were with a thunderbolt, and almost immediately expires. In most cases, however, it manifests itself in its mode of attack more like other diseases. Wherever it comes it is terrible indeed; it fills the inhabitants with terror and dismay; "the very sight of the external expression of the unutterable agonies of its victims, appals the strongest nerves;" even physicians, whose feelings, by their profession, are steeled against undue emotions, confess themselves unmanned, and their whole frame to be chilled with horror, when they stand over their suffering patients, feeling as if their own sympathy would inevitably draw them into the same convulsions, and to the same fate. They say, "We never saw disease on this wise. It is new—it is strange—it makes us wish we were not physicians." Here man finds himself inclined to fly from the distress of his fellow when he stands most in need of his assistance, stricken with horror at the frightful phenomenon before him. Such are some of the features and effects of this disease which has at length fixed itself on our continent, appearing equally as destructive here, as it has been in the old world.

What is the nature and essential cause of Cholera? The most rational explanation that has been given, in the opinion of the writer, is, that it is the presence of a miasm, or poison in the atmosphere, which enters the blood through the absorbents of the skin, lungs, and digestive organs, vitiating the whole mass; and being carried in the circulation, this miasm or poison is brought in immediate contact with the brain, spinal marrow and nerves, irritating the whole nervous system. The disease then begins to develop itself; the secretions of the liver and kidneys are diminished, the result of a diminution of nervous power; the system does not generate the usual quantity of heat; coldness of the skin and extremities follow, the blood recedes from the surface, and the circulation in the capillary or most minute vessels is diminished; the heart, larger blood vessels, and internal organs become oppressed with blood; the blood being driven from the surface by the diminution of heat, and loss of energy of the system, the acrid matters contained in it are thrown in great quantity upon the alimentary canal, producing irritation of the stomach and bowels, pain, vomiting and purging, cramp, and all the other symptoms follow as a consequence of this disordered state of the system.

Some medical gentlemen have gravely contended "that all changes in the condition of the blood are wrought by impressions made through the intervention of the solids; that disease *first* begins its operation on the nerves; and that the nervous affection produced by the disease so operates on the blood as to vitiate its quality; or in other words, the brain, spinal marrow and nerves, are first irritated

by the action of the morbid poison ; and then the blood, which was pure before, becomes vitiated in consequence of the nervous irritation.

This doctrine throws a dark cloud over the causes of disease, and the operations of medicine, and leads to the most confused and erroneous views in practice. Its advocates have never been able to give any satisfactory reasons for their belief ; and its inconsistency and fallacy have been shown by some of the most distinguished professors in medicine.

The brain and spinal marrow are beyond the immediate reach of external agents, and the nerves are not exposed, except at their sentient extremities or terminations on the surfaces. A miasm in the atmosphere cannot reach them except it first gets access into the blood through the absorbents : then, in passing the rounds of the circulation, it is immediately brought in contact with every part of the nervous system. If the poison, which produces the Cholera, was of that subtile penetrative nature of the electric fluid, then indeed, it might pass immediately to the nervous system, and act immediately upon it, without first entering the blood ; but no physician that I know, has attempted to support such an opinion. We know that the poison of rabid animals is conveyed to the brain and nerves through the medium of the blood, producing a general irritation of the nervous system.

Many of the symptoms of Cholera and Hydrophobia have a striking resemblance. In Hydrophobia the patient has great anxiety ; languor, spasms, difficult respiration, violent convulsions, redness of the eyes, pain in the stomach, vomiting, &c. The two diseases, however, taking the whole assemblage of symptoms into view, appear very different ; yet the similarity between them is so great that it seems highly probable that both of them may arise from two different kinds of poison, first entering the blood and producing a diseased state of that fluid which is so essential to life ; and then acting immediately upon the nervous system, exciting general irritation and disease.

If the rabid poison is carried to the nerves through the medium of the blood, may we not infer that the miasm producing Cholera may also be carried in the same manner ? Indeed we cannot conceive how any kind of poisonous effluvia can get in contact with the brain, spinal marrow, and nerves, so as to produce a general irritation and disease of the whole system in any other way.

The Cholera, we infer then, is a peculiar or specific poison which floats in the atmosphere, and may be carried by various means from place to place. This poison can be known only by its effects, for it cannot be discovered and examined by the senses. Indeed, this is all that we know of the nature of the miasmata which produces

fevers and other diseases which generally prevail. We know their existence only by their effects; and not by detecting their substance, and examining its properties.

The Cholera is said to emit a peculiar odour; so do the measles and some other diseases, by which a person whose sense of smelling is very acute may easily distinguish them in that way.

No person doubts that the fragrance of the rose is owing to volatile particles exhaled from it, and diffused in the atmosphere, which are brought in contact with the olfactory nerves.

The Cholera, when the poison is concentrated, has a peculiar odour recognizable by the sense of smelling, and therefore must be a substance or miasm floating in the air, which may be taken up by the absorbents, and carried into the blood. But to describe more particularly its essence, is beyond the ken of human intellect. We may know as much of its nature as we know of other diseases; we may know it by its effects, and in no other way.

SYMPTOMS OF THE ASIATIC CHOLERA.

The Cholera, like other diseases, generally gives warning of its approach. A coldness of the surface and extremities, stoppage of perspiration; oppression at the chest; and symptoms of a disordered state of the stomach and bowels, are signs of the approaching commotion in the system. Though, at this time, the distinctive character of the disease is not clearly manifest, yet no time should be lost, for this is the most favorable moment for applying remedies to moderate its violence, or to arrest its progress altogether. The delay of a few hours will in most cases place the patient beyond the reach of medicine. Hence it is important that every person should make himself acquainted with the symptoms, character, and treatment of this malady, that he may be warned of its approach, and procure relief in the earliest stage of the disease, when it is most easily prevented and cured.

The first symptoms of the Cholera have been described to be for some hours, a sensation of oppression and anxiety, and heat in the region of the stomach; distress in the abdominal regions; nausea; slight cramps; looseness; vomiting; diminution of heat and receding of the blood from the surface; pulse small; checked perspiration; and diminished secretions of the kidneys.

Dr. Russel, who was at St. Petersburg when the disease prevailed there, thus describes the symptoms: "At first an evacuation of feculent matter; slight cramp in the legs; nausea; pain or heat at the pit of the stomach; general debility. Ordinary diarrhea often

continues for one or more days without any other remarkable symptoms. The patient all of a sudden, generally in the morning, presents a livid appearance, and is almost deprived of life. When the symptoms are arrested in the earliest stage of the disease by a prompt and judicious treatment, the evil is completely averted.

“As the disease advances, there is violent headache and giddiness ; great languor ; oppression at the chest increases ; severe pains ; a very weak pulse ; vomiting first of undigested food ; and then of a watery fluid mixed with phlegm ; frequent purging ; cessation or very scanty secretion of urine ; excessive thirst ; cramps in the legs, beginning at the toes, and by degrees reaching the body : as the disease advances the voice becomes feeble and hoarse ; eyes dull and sunk in the head ; the features changed like those of a corpse ; coldness, contraction, and bluish tinge of the extremities ; coldness over the whole body ; lips and tongue becoming blue ; cold and clammy perspiration ; the spasms become greater, attacking the most vital parts ; the pulse ceases ; the beating of the heart becomes scarcely sensible ; and the patient, after extreme suffering, dies quietly, having generally, a few moments ease just before his end.”

Dr. Keir at Moscow, observes that the Cholera generally commences with a sensation of general indisposition, which is soon followed by an extraordinary sensation of weight, and oppression at the stomach ; a sense of suffocation, and sometimes ringing in the ears. These symptoms are soon followed by general debility, nausea and vomiting, and evacuations from the bowels.

The matter contained in the stomach and intestines is first expelled ; and then a watery liquid resembling barley or rice water ; these exhale a strong and peculiar odour. The pulse becomes small, or quite insensible ; the surface of the body cold, and respiration oppressed. Spasmodic contractions of the muscles of the extremities, sometimes of the thighs, but rarely of the trunk ; attended with acute pains in the parts which are the seat of these spasms ; great thirst ; evacuations by stool and vomiting become more and more frequent ; the eyes become dim, surrounded by a blackish circle ; the features greatly altered ; the body falls away sensibly ; the hands and feet become hard, and the skin on them wrinkled, as if they had been soaked in hot water ; the skin cold over the whole body, and more particularly at the extremities ; a cold sweat covers the face, arms, and chest ; great anxiety ; difficulty of respiration and agitation then become manifest ; tongue pale, or of a bluish tint, covered with a thin layer of tenacious mucus, giving a cold sensation to the touch ; hiccough sometimes ensues, the breathing

becomes more and more difficult, and the patient dies in a few hours. At other times the patient continues a long time in this condition without any pulse, retaining his intellectual faculties, until a few moments before death.

“In some patients, the disease commences by a diarrhea, which continues for a few days, and then it becomes complicated with all the symptoms thus described.

“In others, the disease is limited to nausea, vomiting and bilious evacuations. In certain cases, the patient appears as if attacked by some sudden blow, or struck by a thunderbolt; from the commencement the most dangerous symptoms manifesting themselves. Such die suddenly before any relief can be offered them.” Dr. Keir, further observes, “that in other cases, in consequence of the effects of good treatment, the warmth of the system was restored; the pulse returned; the evacuations became less frequent; the spasms became less violent; and the disease diminished rapidly, and the patient could sleep and take nourishment. A fever followed, which, if it was moderate, the patients generally recovered. At other times, the fever was of an inflammatory character, and at length terminated fatally. In some cases, an eruption similar to the nettle-rash or measles, appeared during several days, on different parts of the body. Such patients as had these symptoms, always recovered. The duration of the disease was from a few hours to several days. Those that recovered were a long time regaining their health.”

Dr. Barry, in a letter from St. Petersburg, July 20th, 1831, thus describes the symptoms. “I came here with an impression strongly fixed upon my mind, that the essential and dangerous features of Cholera Morbus were immoderate and ungovernable vomiting and purging of a serous fluid, violent spasms, and exhaustion and collapse necessarily attendant on such a state; consequently, that the first indication would be, to restrain these depressing evacuations. The fact is, however, that vomiting and purging are among the least important symptoms of the present epidemic, though the appearance of the fluid evacuated is highly characteristic. Rice water strained, and allowed to settle down, is, when shaken up, the best type. The evacuations both upwards and downwards, either soon cease, or are easily repressed; while in *many* cases, and these the very worst, there are either none, or they are very trifling. It is the sudden paralysis and rapidly diminishing action of the heart, of the arteries, and of the organs of respiration, with the stasis and thickening of the blood, the loss of power to generate heat, that constitute the first the most fatal stage of the disease. Blue black flat lines mark the course of the larger veins; a deadly livor color of the skin; even the tongue is icy cold: the respira-

tion is short, quick, and imperfect; the scrobiculus cordis and diaphragm drawn violently upwards; the pulse and voice extinct; the limbs and belly torn with spasms; the hands and feet shrivelled, corrugated, and much diminished in volume; the reason unimpaired. It would seem as if all the colourless cells and vessels upon which the turgor or plumpness of the integuments so much depends, were squeezed to emptiness, and nothing left but the thickened colouring matter of the blood. If this state cannot be overcome in a very few hours, the sufferer must die. *Mordechi*, or *mort de chien*, or *mort noir*, would either of them be a much more appropriate name for this inexplicable malady, than that by which it is at present designated.

“When the first stage safely passes, very rarely indeed, not five times in a hundred does the patient return to health without passing through a dangerous fever, which not unfrequently assumes a typhoid character, with reddish, brown, dry tongue; stupor; suffused eyes; constipated and tender belly; dark sordes about the lips and teeth. The pulse, however, is generally quicker, and the skin hotter than in primitive typhus. In this state many die from the fourth to the seventh day, and even later. In other cases the fever is mild, and goes off within the fourth day by copious perspiration.

“My object in entering into this detail is to warn you that many and fatal cases of the present epidemic may occur with little or no vomiting or purging. The shrivelling of the fingers and toes, the colour of the skin, the shrinking of the features, the coldness of the tongue, the feebleness or extinction of the pulse and voice, the rice water evacuations, when there are any, are the true marks of the disease, not to be mistaken.”

ON THE PREVENTION OF THE ASIATIC CHOLERA.

In order to enable those who are unacquainted with the structure and organization of the body to understand this subject, it is necessary first to make some remarks on the nature of the absorbent vessels; and explain the laws of absorption.

1st—OF THE ABSORBENTS.

The absorbents are a numerous set of minute transparent vessels, distinct from the blood-vessels. They begin by numberless open mouths, too minute to be visible to the naked eye. They arise from the whole external surface of the body; from all the air cells in the lungs, and from the whole extent of surface of the alimentary canal. They also arise from the cellular substance, and from the

surface and substance of the different viscera, from ducts and glands, and from every interstice and part of the body.

They are divided into lacteals and lymphatics. The lacteals are of the same nature of the other absorbents. They begin from the inside of the intestines, absorb the chyle, and convey it into the blood.

The course of the absorbents is from the surfaces and cavities towards the large blood-vessels into which they empty their contents. The extreme branches of the absorbents, after leaving the surfaces, form repeated unions, and larger vessels like the veins. Most of the lymphatics and lacteals unite and form the thoracic duct, which empties itself into one of the great veins near the heart. The absorbents take up various substances applied to their mouths, and convey them directly into the blood. Effluvia from noxious bodies, miasmata, and poisons floating in the atmosphere may be received into the lungs in the air which we breathe, sucked up by their absorbents, and carried into the blood. Such matters may also be taken up by the absorbents of the skin and alimentary canal, and pass through them into the blood. Hence it may be perceived, how numerous are the channels to convey noxious matter into the blood; and when they get there, how quickly it is carried in the blood to every part of the body, and brought in contact with the whole nervous system. This matter, in many instances, acts upon the nerves so as to produce irritation, and a diseased action of the whole system; at other times, the noxious matter is carried out of the body in the perspirable fluid, in the secretions of the kidneys, and evacuations from the bowels, before it induces disease in the system.

2d—LAWS OF THE SYSTEM RELATING TO ABSORPTION.

Absorption is *increased* or *diminished* by the *increase* or *decrease* of fluids in the system.

If we fill the blood with fluids by drinking frequently and copiously, it will excite perspiration from all the different surfaces, and there will be little or no absorption; but when the fluids of the animal are exhausted, the power of absorption is great from every cavity and surface of the body. That the body has the power of absorbing at *one time*, and *not at another*, is a fact well known, and has been repeatedly observed by medical men. It frequently happens that several persons go into infectious air, or into a room where there is a putrid fever, yet some escape, while others receive the infection; and it sometimes happens that from inoculation of the small pox the infection is not received, nor does it always produce the disease. That the body does freely absorb when fatigued, and by long fasting, there cannot be a doubt. It is a common saying, that a person coming off a journey, fatigued, and fasting, is almost sure

to receive infection, if he should go where there are putrid fevers or infectious air.

Doctor Huxham, in his *Essay on Fevers*, page 9, says "that it is dangerous to go abroad fasting in the cool air of the morning, or on an empty stomach:" page 29, "that persons who use a warm moistening diet, and warm relaxing diluents, counteract the effects of cold air, and escape such disorders as are common to the seasons;" and in page 22, he says "that no person, very much fatigued, or fasting, should enter into contagious air, or visit persons sick of a malignant or pestilential fever." "I have known," says he, "this to prove fatal to many physicians; for then they most readily receive the contagious effluvia or infection."

Mr. Hale says, "that a strong young man, exhausted by labour and fasting, absorbed in the space of one night, eighteen ounces."

Dr. Cruikshanks observes, that the longer a person has fasted, the more the power of absorbing is increased.

It has been found by experiments, that by fasting and drinking very little fluid for two or three days, the bile has been absorbed and carried into the blood. It first appeared on the tunica conjunctiva, or white of the eye, and afterwards it tinged slightly the whole skin with a yellow tinge; and a bitter taste was perceptible in the mouth. This appearance has been removed in a short time by drinking plentifully of watery fluids.

The application of a large blister frequently produces irritation of the bladder, which will be prevented by giving plenty of diluents; barley water, or whatever drink may be taken, will keep the absorbent vessels continually filled, so that none of the lymph or serum impregnated with the flies can enter the circulation. From what has been advanced, it appears evident that by taking freely of watery liquids we may close all the avenues by which disease finds its way into the system, and prevent infectious and contagious matters from entering the blood; and that by fasting and abstinence from drinks, we make the power of absorption greatest, and open every avenue for the entrance of disease. Therefore, we conclude, that by drinking often and plentifully of pure water, rice water, barley water, and other simple kinds of fluid, we prevent in the most effectual manner that is possible, the entrance of contagious and infectious matters into the system.

Having made the foregoing remarks on the absorbent vessels, and laws of absorption, we now proceed to the subject of prevention.

When the angel of death is commissioned to strike the blow, no human means can stay his hand, and the creature formed out of the dust, must return to dust again.

Though all diseases are judgments sent by the Almighty upon the inhabitants of the earth for their sins, yet they are, in general,

under the control of certain laws, and may be averted in their earliest stages by the use of proper remedies.

Diseases of a highly malignant character, such as the Yellow Fever, Pestilential Cholera, &c., must be prevented, or arrested in their progress on the first approaches of indisposition, or they will generally prove fatal.

The first object should be to keep the system in such a state, that it is least susceptible of disease.

We have already explained the laws of absorption, and in what manner *contagion* and *infection* can most effectually be prevented from entering the system.

In addition to keeping the vessels of the body full of fluids to prevent absorption of infectious or contagious matters, bathing and washing the whole body daily, and the application of friction with a coarse cloth or brush, is very necessary.

Keeping the skin warm and gently perspiring is highly important. Such a quantity of cloathing should be kept on as the temperature of the weather requires; in an excessive hot day the clothing should be very thin, but during cool damp east winds, thick clothing is necessary. *The essential point is to keep the skin and extremities warm, without overheating the body. Excessive heat produces relaxation, and predisposes the system to disease, as well as cold; both extremes should therefore be carefully avoided.*

The time of taking drinks, and the quantity taken, is of great importance, for on these two points a regular and uniform perspiration of the skin chiefly depends.

Drinks should be taken at short and stated intervals, as much as circumstances will admit. Half a pint of rice water, barley water, pure water, or some simple fluid taken regularly during the day and evening, will keep a breathing moisture on the surface, and the system in the greatest possible state of security, without oppressing the stomach, or causing any uneasy sensations; so far from it, that it greatly tends to free and lighten the system when there is any oppression or heaviness, and promotes a vigorous and healthy action of all the organs. In such a state of the system the absorbents are full of fluids, and have the least power of taking in noxious matters from the atmosphere; and perspiration being uniform and free, any infection that may have been received into the system, is immediately carried out again in the fluids passing through the pores of the skin, and in the secretions of the kidneys, before there is time for it to act on the nervous system, so as to produce diseased action.

Diet.—The food should be light and easy of digestion, and taken in such quantity as may be necessary to afford due nourishment to the body, without oppressing or overloading the stomach,

or at length causing plethora or fullness of blood. It is important to make use of good bread, which should be light, well baked, and not eaten while fresh. A feeble stomach is always disturbed by hot heavy bread; and headache, vertigo, and sometimes cramp, convulsions, and cholera are caused by it. In cases of a weak and disordered state of the stomach, ship bread or crackers are preferable to raised bread. Boiled milk, with rice or bread, is a wholesome dish. Mutton, lamb, or beef soup, containing rice or barley, are good articles of diet.

Fat, rancid, and oily meats; all kinds of pastry confectionary; crude watery vegetables, and unripe fruits, predispose the system to disease, and should be avoided. It is, however, by excess in quantity that we very frequently injure the powers of the digestive organs. When too great a quantity of food is taken, the stomach cannot exercise the full power of digestion upon it; and it passes slowly or rapidly along the alimentary canal, as foreign and irritating bodies, keeping up a constant irritation there, and producing numerous morbid effects in other parts of the body; and in hot weather it is often the direct cause of an attack of Cholera. Food that is very sweet has a tendency to create an acid state of the system, and should be used sparingly. Brandy and all other spirituous liquors predispose the system to disease: even if taken only moderately, they invite an attack of this terrible pestilence.

All warm aromatic drugs, such as cinnamon, ginger, &c., chewed and taken into the stomach daily as a preventive, increase the action of the secretory vessels of that organ, and determine the blood, and the Cholera poison, when it exists in it, to the stomach and bowels, and thereby acts as an exciting cause of disease. The determination of the blood should be made to the surface of the skin by washing and smart frictions, and not to the stomach and bowels, by heating and stimulating articles.

Drinks should be taken often through the day and evening. The best kinds are pure water, thin rice water, barley water, arrow root, slippery elm tea, and others of a like character.

The *greatest preventive* of disease that can be taken while a person is exposed to pestilential atmosphere, is to take *half a pint* of either of these simple kinds of drink, or any others of a like nature, **EVERY HALF HOUR**, as nearly as circumstances will admit.

This preventive method is deduced from the following laws of the animal economy:

1st. All contagious and infectious matters that get access into the blood so as to excite a general irritation of the nervous system, and induce violent disease, enter either through the absorbents of the skin, the lungs, or the alimentary canal. When the vessels are full of fluids, then there is the least absorption; and when a person

has been fasting and taking no drink for a considerable time, then the power of absorption is greatest. Infectious matters applied to the surface, it is said, will not be absorbed so as to induce disease when the system is full of fluids, and there is a free perspiration. Thus by keeping the vessels of the body full, by taking drinks often, we close the avenues by which disease enters, and secure the system, in a great measure, from danger.

2d. By taking half a pint of drink every half hour, or as much as that quantity at short intervals, it excites a free, vigorous, and uniform perspiration, and any noxious matters that may have entered the system are immediately carried off with the perspiration of the skin, in the secretion of the kidneys, and by the other exhalents, before it has time to accumulate and concentrate itself so as to excite irritation of the nerves, and a general disturbance of all the animal functions.

In confirmation of this preventive method, the following extract from Dr. M'Lean*, on Fever, page 256, is subjoined :

“It is a custom,” says he, “in the West Indies, founded on sensation, to drink during the forenoon and the day, some diluent, refreshing drinks ; this is done in obedience to thirst, a very imperative sense. Weak sangoree, or a drink made up of sound madeira, water, acid and sugar ; lemonade ; tamarind water, and such compositions, are cooling and pleasant ; and may contribute to health by supporting perspiration.

“Perspiration greatly conduces to health ; it preserves, by the evaporating process, a great coolness in the body ; it relieves the vessels from the distention of the fluids, and permits the expansion by heat to go on without pain or detriment. It diminishes the saline and stimulant part of the blood ; and it may throw out of the body the miasmata themselves, which excite and cause fever.

“The obstruction of this most useful discharge must be productive of the worst consequences ; *but it can only be supported by keeping up a regular supply of fluids*, which these mild diluents very amply do. It is sometimes astonishing, how quickly it is produced after a drink of this kind ; it bursts forth almost immediately. Whenever I found perspiration to diminish, and my skin becoming parched or dry, I used to re-establish it immediately, by a draught of sangoree or lemonade.

“A free perspiration is the surest preservative of health in a hot climate. In carrying on duty at St. Domingo, I was exposed to a good deal of riding, being generally six or eight hours on horse-back every day ; and consequently I perspired very freely. I never

* Dr. M'Lean was one of the surgeons of the British army, and resided nearly three years at Port-au-Prince, in the island of St. Domingo, where the climate was so sickly, and the Yellow Fever prevailed to such an extent, as almost to annihilate the British army at that place.

wore flannel, but made use of cotton shirts. It was not unusual for me to shift five times a day; sometimes oftener, each shirt being drenched in perspiration. To this profusion of it I attribute my safety, amidst so much exhalation of miasmata, for so long a time. I drank freely of lemonade, sangoree, tamarind water, weak wine and water, and other diluent compositions; and when night came I was always prepared to enjoy my repose."

Bathing.—The object of bathing and frictions is to open the pores, and promote a more free perspiration, and prevent the absorption of noxious matters that collect on the surface. Few individuals understand the advantages to be derived from them, or the best means of doing it, because they are ignorant of the structure of their own system, and the great laws of the animal economy. As few people have baths, or can have access to them, I shall confine my remarks to *washing the body and frictions*. Merely plunging in water, or wetting the surface does not free the skin from its impurities; but it requires the use of alkalies and smart frictions with a cloth or brush.

Take two quarts or more of warm water, (those may use cold who prefer it) add to it some soap, or a large table spoonfull of pearlash, wet a coarse cloth in it, and wash the different parts of the body in succession, not exposing the whole surface to the air at once, excepting the weather is excessively hot, then there is no danger. Rub the skin thoroughly, and for a considerable time, with a wet cloth, so as to make it look red, and fill the vessels on the surface with blood. Then take a dry cloth and rub the part thoroughly again till it is dry. Then cover that part, and wash another, in the same manner; and so proceed till the whole body is thoroughly cleansed. Washing the body in this way leaves a warm glow over the whole surface, and produces the best effects. You experience an universal comfort; the blood circulates with freedom; and a lively sensation diffuses itself over the whole body. But when bathing or washing is merely used without frictions, the skin is not properly cleansed, and a chill often takes place, which is productive of injury instead of benefit.

CLEANLINESS.

Linen that has been worn through the day, and is saturated with sweat, must contain a portion of the poisonous miasmata floating in the atmosphere where pestilence is prevailing; the properties of the sweat itself, is also highly deleterious when it is absorbed and carried into the system; therefore, it is very dangerous to sleep in linen saturated with sweat. This is evident, for the power of absorption is considerably increased during the night, and some of this matter will be absorbed and carried into the blood. Lying in bed

late in the morning, in the impure vapours of the body, the absorbents sucking them in, causes languor and debility, and predisposes the system to disease.

The greatest cleanliness should be observed in articles of dress, bedding, in every part of the house, yard, &c. The linen taken off a person sick of any kind of disease should be washed without delay. There cannot be a more certain and effectual method of spreading disease than to take infected articles of clothing and bedding, roll them up and let them remain several days before washing. Many instances have occurred in which it proved fatal to those who inhaled the noxious effluvia arising from them.

The neglect of cleanliness is a most fruitful source of disease; and when pestilence prevails, it flies to the filthy and seizes them as its victims.

If after all, notwithstanding this preventive method, the Cholera should attack the system, the full and free perspiration, and the increased action of the vessels of the skin in consequence of daily washing the body and thoroughly rubbing the skin each time, will, in all probability, change the mode of attack of the disease, and instead of spending its force on the stomach and bowels and internal organs, the acrid matters will be thrown to the surface of the skin, causing eruptions over the body. When this is the case, experienced writers on the Cholera say, that such cases never prove fatal, but that when eruptions appear over the body, the patient always recovers.

To purify the air in a room.—Put one pound of common salt in an earthen vessel, and pour over it from time to time a small quantity of sulphuric acid, (i. e., oil of vitriol) till the whole is moistened. If the air is foul and particularly offensive, apply a gentle heat under the vessel to extricate a larger quantity of vapour; but in general, the simple addition of the acid to the salt will be found sufficient, unless the apartment is very large.

“We stated some time ago,” says the London Sun, “that in consequence of a letter from H. Raeburn, Esq., of St. Bernard’s, the Board of Health of Musselburgh adopted the plan of fumigating the streets, lanes, and houses there with chlorine raised from sea salt and manganese, by means of sulphuric acid; and it is worthy of remark, that from the commencement of this operation the disease rapidly diminished in number of cases and in virulence; so that in eight days it had entirely ceased in Fisherrow, and the instances of it have been very few, even in the Musselburgh district. But what happened at Portobello is probably still more conclusive. The Cholera had just begun to rage in that village; from the 17th to the morning of the 18th inst. there were seven deaths, and

several cases considered dangerous. The Board of Health there also adopted the plan of the public and private fumigation, which was most thoroughly done; and the malady seems to have been subdued, or rather extirpated, in one day. Portobello has had no new cases since the 22d, and no more deaths, except one on the 24th.’”

ON THE TREATMENT OF THE ASIATIC CHOLERA.

From not having had an opportunity of seeing any cases of the prevailing pestilence, my views of its treatment must be deduced from the well known laws of the animal economy; the analogy which exists between it and the common Cholera Morbus; certain other diseases which partake of its character, and the writings of different physicians who have been familiar with the complaint in other parts of the world where it has prevailed.

It is the universal belief that diseases in general, arise from some kind of noxious matter, or poisonous effluvia that is brought to act some how or other on the human system; and that each distinct disease is produced by a different kind of matter.

The matter producing the Small Pox, the Measles, and the Yellow Fever, are each essentially different and distinct in their character. The virus of a mad dog, the poison of a rattle-snake, and that of the viper, are not more distinct than the several kinds of matter are which produce the different diseases that prevail. The different kinds of miasmata or poisonous effluvia produce different effects and symptoms on the system. Some possess great virulence, and soon destroy life; others are more mild in their character, and rarely prove fatal.

Miasmata or contagious matter may be received into the system, and expelled again before it has excited any symptoms of disease, when perspiration is kept very free by often taking diluting drinks, and all the organs of the body are kept in healthy action.

When disease first begins to manifest itself, if the cause, which must be some kind of noxious matter acting on the blood, or on the nerves and solids, or all of them at once, is then immediately removed by proper remedies, it will be arrested in its progress, and prevented.

If the premonitory, or first slight symptoms are not attended to, and the infectious poison is suffered to remain in the system, till it produces great irritation of the nervous system, and impairs the healthy action of the organs to such an extent, that they cannot be restored again, death must be the consequence.

It is much easier to remove the cause of disease when the first symptoms of indisposition begin to manifest themselves, before the powers of the system are impaired, than it is after extensive derangements have taken place.

In a very few cases the intensity of disease is so great, as to impair the animal functions to such an extent at the first moment of the attack, that no curative process can avail. Cases so severe, however, are very uncommon, even in pestilential seasons, when they more often occur.

In the great majority of cases there are premonitory symptoms, which, if early attended to, the disease may be prevented by suitable remedies; or if not entirely prevented, made to assume a mild character.

The only rational and philosophical method of curing Cholera, or fever of any description arising from poisonous effluvia acting on the system in some mysterious manner, is to remove the cause.

If a viper, or venomous reptile had fastened on your hand, you would not be at a loss to know what means to use to get rid of the poisonous creature; you would throw him off at once: in like manner throw off the cause of disease, evacuate it, and throw it out of the system as you would throw the viper from your hand.

All kinds of noxious matters, or causes of diseases expelled from the body, are expelled by the action of the organs and vessels of the system; thus offending matters in the stomach are rejected by the action of the stomach by vomiting; the contents of the intestines are evacuated by their peristaltic or muscular motion; noxious matters in the blood are expelled by the excretory power of the vessels of the skin; the secretion by the kidneys, &c.

The object of medical treatment should be to increase the action of the vessels and organs of the system in such a manner that they will exert their greatest power in expelling the cause of disease.

Thus emetics and cathartics (which are proper in most cases of common diseases) increase the action of the stomach and bowels, and assist in expelling any acrid or irritating matters which they may contain; drinks taken into the stomach, dilute and weaken the power of any irritating matters that may be in the alimentary canal, and entering the blood through the lacteal vessels, furnish the exhaling vessels of the skin, kidneys, lungs, and alimentary canal with a vehicle to assist them to throw out and carry off, the subtle poisonous effluvia that has been taken in by the absorbents, is mixt with the whole mass of blood, and is acting on the whole nervous system, and, in a word, upon the whole body. Except the system is regularly and abundantly supplied with water, and simple drinks, the *cause* of disease, the

noxious matters in the blood cannot be removed ; no other remedies in nature can do it.

And here medical men have erred, they have been solidists in theory, i. e. believing that disease first originates in the solids ; and solidists in practice, i. e. believing that solid remedies are the most efficacious,—considering fluids, without which the exhaling vessels have no power to act to remove disease from the blood and nervous system, as mere secondary remedies, which might be given to allay the appetite of thirst ; and sometimes to aid the operation of diaphoretics.

As fluid and solid articles of food are both indispensable for the support of the system, so fluid and solid remedies are both equally necessary in the cure of diseases.

In the treatment of Asiatic Cholera, and fevers in general, the following indications are to be attended to :

1st. To preserve an equilibrium of the circulation of the blood, keeping the surface of the skin and extremities warm, obviating and preventing either diminished or increased action.

2dly. To evacuate the offending matters which are the real cause of the disease, both from the alimentary canal, and from the blood.

3dly. To support the strength of the patient.

When the premonitory symptoms occur, which are described in Doctor Bally's letter, (see page 27,) let the patient be put in bed and sufficiently warmed, by warm applications to the feet, and a due degree of covering ; or warm the body with hot vapour of alcohol. (See page 23.) Give freely of hot diluting drinks, but nothing stimulating.

In cases of plethora, or fulness of blood, bleeding will be useful. The indication for bleeding is a hard pulse, a pulse whose action feels exceeding strong at each pulsation. A full soft pulse does not indicate bleeding.

After the body has been thoroughly warmed, and warm drinks have been taken two hours, prepare the following wash : to one quart of hot water, add two large table spoonfulls of either the carbonate, or super-carbonate of Potash, or Soda, or Pearlash, dip a flannel therein, and with it rub the whole body thoroughly under the clothes, so as not to expose the body to the cool air more than can be avoided. Then prepare a clean wash in the same manner as before, wet a piece of flannel therein, and spread it over the whole surface of the bowels. This kind of wash affords much greater relief to the internal organs than any other. Its great value can only be appreciated by a long practical knowledge of its very happy effects*.

* An intimate acquaintance of the writer, had a lumbar abscess seven

Give from one gill to half a pint of thin rice-water, barley-water, toast-water, &c., once in 20, 25, or 30 minutes. If the stomach is weak or oppressed give a smaller quantity for a time, and afterwards increase it as the state of the stomach will admit. Continue this treatment forty-eight hours; if the patient then feels strong and well, it may be omitted, but if there is languor or debility, continue it four days. After the first twenty-four hours, if the patient has perspired freely, it is not necessary to confine him to the bed all the time, but he may sit up and walk about the room, observing however to take his drink with the greatest regularity. And here let me make one remark—after a person has been perspiring freely some time, and the skin has been properly cleansed, he cannot take cold from any slight exposure, such as sitting up, and walking about the room, or going into the yard, &c., so long as he is taking drinks regularly every half hour, for the vessels being filled with fluids forces perspiration at a low temperature of the body. If it should happen, however, that the patient should have a chill, then he should immediately take again his bed. His diet should be very light, no hearty food should be taken.

After perspiration has been continued twelve hours, a portion of rhubarb, or rhubarb and magnesia may be proper, and given with safety.

By this simple method of treatment, the premonitory symptom may be most effectually removed, and the impending commotion prevented in the system.

When violent symptoms manifest themselves, the one which requires to be first attended to, is, *the great coldness of the skin and extremities.*

This drives the blood from the vessels of the skin, distending those which are internal, and surcharging the brain, and all the vital organs; causing oppression in the region of the stomach, and distress and pain in the bowels. It is of the greatest importance immediately to remove this symptom and equalize the circulation, i. e. to restore a free circulation of the blood to the surface and extremities. To fulfil this intention, the most certain and effectual method is to place the patient in bed, and

years, attended with caries of a transverse process of one of the vertebræ of the loins, and several of the ribs. By a frequent application of the alkaline wash, and a milk and vegetable diet, he succeeded in healing up the sore, and has kept it healed up 17 years past, though the bone is not sound, several pieces having come out within that time. When a piece of bone becomes detached, it excites irritation and pain, but wearing over the diseased part a piece of flannel wet with this wash, affords complete relief, keeps the skin slightly irritated, and prevents the accumulation of matter. When the bone arrives at the surface, the passage behind through which it had passed is healed; and a few weeks after its extraction, his back becomes nearly as strong as if it never had been diseased.

make it hot with steam, so as to envelope the whole body of the patient; let two persons be appointed to attend upon him constantly, and rub the limbs and body continually with cloths, till the natural warmth and circulation is restored, and sweating begins. If the natural warmth of the skin and extremities, and free circulation of the blood is not restored, and sweating produced, the disease will have a fatal termination.

The power of heat and frictions combined is the greatest that can be employed to restore the lost balance of the circulation, and remove the congestive or oppressive state of the internal organs.

The length of time that will be necessary to keep the body immersed in hot vapour, and to apply frictions, depends on circumstances. It should be continued till the body will keep warm, and the circulation continue free without these means.

In cases of the spotted fever, otherwise called the cold plague, (a disease more fatal than the Cholera itself, in proportion to the number attacked with it) which prevailed in some parts of this country in 1808, 1810, and 1812, it was found essential, in order to save the patient, to keep the bed hot with steam during 48 or 60 hours. If the heat and frictions were discontinued short of that time, the patient would become cold, like a piece of iron taken out of the fire, and soon die.

During the prevalence of this pestilence, various means were employed to heat the bed with steam. In some parts of the country in cold weather, they took brands of fire, quenched them in water, wrapped them in cloths, and placed them round the patient in bed, and when they began to cool replaced them with others. Some boiled square blocks of wood cut for the purpose, and used them in the same manner. Hot stones or bricks wrapped in wet cloths may be used.—Care should be taken not to raise the heat too high and burn the patient. As soon as the action of the system is restored so as to retain its natural heat, and keep the skin gently moist, the steam should be discontinued. To continue it longer would prove injurious by keeping the body too hot. The injury, said to have been done by steam doctors, has not been by steaming their patients when cold, but by continuing the steam after they had been sufficiently warmed. When a person is taken with a chill, the quickest, simplest, and most effectual method of restoring warmth to the surface and extremities, is to set the patient in a wooden bottom chair, and place under it a tin cup made for the purpose, that will not unsolder, $2\frac{1}{2}$ inches in diameter, nearly full of alcohol, and set it on fire. It burns with a gentle blaze, and makes a dry heat without any smoke.

Then place blankets or coverlets round the body and chair, resting on the floor, and closed round the neck, so as to confine the heat about the body; the feet should be placed on a stool; the head should never be covered. In twenty or thirty minutes the body will be effectually warmed, the patient then should be put in bed, and covered with the warm clothes that were round him. As soon as the person is placed in bed, take one quart of boiling water, and add to it two large table spoonfulls of the super-carbonate of potash or soda, or if that is not to be obtained, two ounces of pearlash, which has much the same effect. Dip a piece of white flannel in it, and spread it over the whole surface of the bowels. This application in the common Cholera, when the pain is excruciating, affords almost instant relief, and is attended with the happiest effects. Mustard poultices should be applied to the soles of the feet. From the very irritable state of the stomach in many cases, on the first attack of the disease, it is almost impossible for any kind of medicine to be retained on it, and every thing is thrown up again almost as soon as swallowed. To diminish this irritation and evacuate the acid matters, let the patient drink plentifully of diluent liquors, such as slippery elm tea, barley water, rice gruel, flaxseed tea, or toast water; and to assist the effect of their operation, warm mucilaginous clysters of the same nature may likewise be given if it is practicable.

Drink should be given immediately after each vomiting; though it may soon be thrown up again, it produces the best effects, serving to dilute and lessen the acrimony of the irritating matters, and to wash them out of the stomach and to cleanse it. And here let it be remarked, that as vomiting is not the disease itself, but a symptom, a salutary effort of nature to throw off the acrid contents which excite irritation, and that this symptom will cease of itself as soon as the stomach is sufficiently cleansed, and a due degree of warmth has been restored to the extremities and surface, therefore administering opium or laudanum to put a stop to vomiting is wholly unnecessary; moreover, as it lessens the powers of the system to throw off the irritating matter, which is the real cause of the disease, without the least correcting its deleterious properties, this narcotic drug may be regarded as an auxiliary to the disease itself, instead of a useful medicine. After the vomiting ceases, and the body is thoroughly warmed, if the stomach is not too irritable, take powdered rhubarb 20 grains, carbonate of soda 15 grains, loaf sugar one small table spoonful; mix them in a cup of water, and give one fourth of this mixture every hour, till it is all taken. By giving it in divided portions it is not so likely to be rejected by the stomach. This serves to carry off the remains of the feculent matter in the alimentary canal—and

the rhubarb possessing some degree of astringency along with its cathartic properties, gives some degree of tone to the vessels of the intestines. The carbonate of soda, by correcting acidity, serves to allay irritation, and produces a very happy effect; the sugar covers the taste of these articles, and makes the mixture agreeable to take. In the common Cholera Morbus this is a most valuable cathartic.

Charcoal, it is well known, is a powerful antiseptic, and corrects the fetor of putrescent, animal, and vegetable substances. Taken into the stomach, it acts as a preventive of fermentation in the stomach and bowels, and corrects the septic or putrid tendency of the fluids. It is a valuable remedy in the common Cholera, and it is said, that it has been used with success in the Asiatic.

Charcoal is only given in very fine powder, in some suitable vehicle. The dose is from one scruple to one drachm.

A clergyman informs the writer, who has long used this article, and highly extols its virtues, that he takes for a dose three heaping tea spoonfull in a tumbler of water, which operates as a cathartic. In Cholera, he thinks a dose ought to be taken every half hour.

Burnt cork is often given in common Cholera Morbus, with the happiest effects.

The first symptoms being allayed, and the patient warm in bed, in a perspiring state, the next great object is to keep a uniform, free and gentle perspiration four or five days and nights, without intermission. If this is not done, the patient may appear to be better for a short time, even perhaps for one or two days, then all of a sudden the worst symptoms will manifest themselves, and the disease will hasten rapidly to a fatal termination.

The Cholera would never prove fatal if the exciting cause was confined entirely to the alimentary canal. If this was the case after evacuating the contents of the stomach and intestines, and giving several pints of mucilaginous drinks, health would be restored. But the Cholera poison has taken a deeper hold, the poison is in the blood itself, and is acting in a manner calculated to destroy life on the whole nervous system. This poison must be separated from the blood and evacuated, or it will prostrate all the powers of the body, and extinguish the lamp of life. To effect this important object water is the only remedy; it is the only vehicle of the several matters, that are excreted or strained out of the blood. Taken into the stomach it passes through the absorbents of the alimentary canal into the blood, and mixes with the whole circulating mass, and having a strong attraction for the

noxious matters, and Cholera poison existing in the blood, it holds them in solution, as it does the earthy matter which we find in hard water, and passing off readily by the skin and kidneys, it carries them along with it out of the body. Of all the productions of nature or art, *water is the most potent, the most powerful remedy to remove disease from the system because it is the only agent in nature that ever conveys any impure or noxious matter out of the blood.*

All persons are sensible that a very considerable quantity of excrementitious matter is carried out of the system every twenty-four hours, by the way of the skin, kidneys, &c., and that the continuance of these evacuations is essential to health; but they have not duly considered that water is the only vehicle which carries off these excrementitious matters, and that their health, in a great measure, depends on a regular supply, and a due proportion of this important fluid.

Water, to produce a powerful effect as a medicine, must be given regularly at short intervals. From one gill to half a pint must be given once in 20, 25, or 30 minutes, during the day and night, till the object for which it is given is accomplished. When the stomach is very weak, give a glass every twenty minutes. The water may be given pure, or in the form of any of the simple preparations of drink which we have mentioned; many others also might be added to the list. Drinks should be given hot, while the body is cold; and cold while it is in a fever heat; and tepid, or a little warm, when the heat is at the natural standard. After the acrid contents of the stomach have been evacuated, if it then continues irritable, and will not retain drinks when taken, they may be given by tea spoonfulls, table spoonfulls, &c., till the irritation subsides.

3. *To support the strength of the patient.*—The nutriment contained in the rice water, barley water, arrow root, toast and cracker water, will, in general, be all that is necessary to support the strength of the patient.

This mode of treatment is not debilitating; the patient loses no strength after it is carried into effect. The continued perspiration does not weaken him so long as the body is kept only gently warm, any more than the sweating of a daily labourer weakens him.

After perspiration is once restored, a gentle moisture can be kept on the skin, while the heat is not raised much, if any, above the natural standard, so long as drinks are given at short intervals. But if a wrong treatment is pursued, and the patient is kept very hot in bed, and sweated excessively, it will prostrate his strength, and be likely to be attended with the worst effects.

Heating the patient excessively with steam, and continuing it a

long time, which some ignorant persons have practised, should be as carefully guarded against, as the Cholera itself.

After the first symptoms have been allayed, and the balance of the system restored, whenever a feverish condition of the body manifests itself, attended with increase of heat, restlessness, &c., from 5 to 12 grains of Dover's powder may be given once in six hours, in half a glass of sweetened water. This is an admirable remedy to compose and quiet the system, and greatly assists in promoting the discharge by the skin. If it excites nausea, or vomiting, the dose must be lessened till it does not produce that effect.

To conclude—as in the treatment of diseases no precise method can be laid down that is applicable to all cases; it is, therefore, in all severe attacks, highly important to procure, without delay, the best medical advice.

OBSERVATIONS ON CHOLERA, BY M. BALLY,

PHYSICIAN OF THE HOTEL DIEU, PARIS.

Notwithstanding the reluctance I feel to draw public attention to my own professional career, I cannot resist the desire I have to make known the invariable success of a preservative method which is no less simple, than it is easy to put in execution. The imperious call of humanity and general inquietude impose this on me as a duty. I dare therefore hope that my intention may not be misunderstood.

Cholera, among persons attended at their own houses, has always been marked by precursory phenomena, which may be considered its first stage. The serious symptoms have always been preceded either by a slight pain in the stomach, or by dull pains in the intestines, with looseness; very often with looseness without any pain whatever.

Sometimes these trifling symptoms, which hardly excite attention, are accompanied by an oppressive sensation of which the sick state the seat to be in the pit of the stomach. Headache, and at times, vertigo have also been observed; also a numbness, and twitching in the extremities, and a tendency to chilliness in some parts of the body. At this stage the disorder is always curable, and the success of the following mode of treatment has never been doubtful.

If then one or more of these symptoms are perceptible, the following course ought to be immediately followed:—

1st. Keep your bed constantly during four days at least, after having added to it one or two additional coverings.

2dly. Apply to the pit of the stomach 20 or 40 leeches, according to the severity of the case.

3dly. Keep on the belly emollient cataplasms, always warm.

4thly. Drink copiously of a slight infusion of linden, or mallows, camomile, or balm, warm.

5thly. Observe a rigorous diet.

If by the employ of these means, an abundant perspiration is produced, and lasts for some days, the dangerous stages of the disease are prevented, provided recourse has been had to these means from its commencement.

It must not be lost sight of, that, when an epidemic reigns, all indispositions remain subject to the influence which produced them, and may degenerate into the serious stages. I think also that a good effect will be produced by persons in the enjoyment of health undergoing this preventive and preservative regimen.

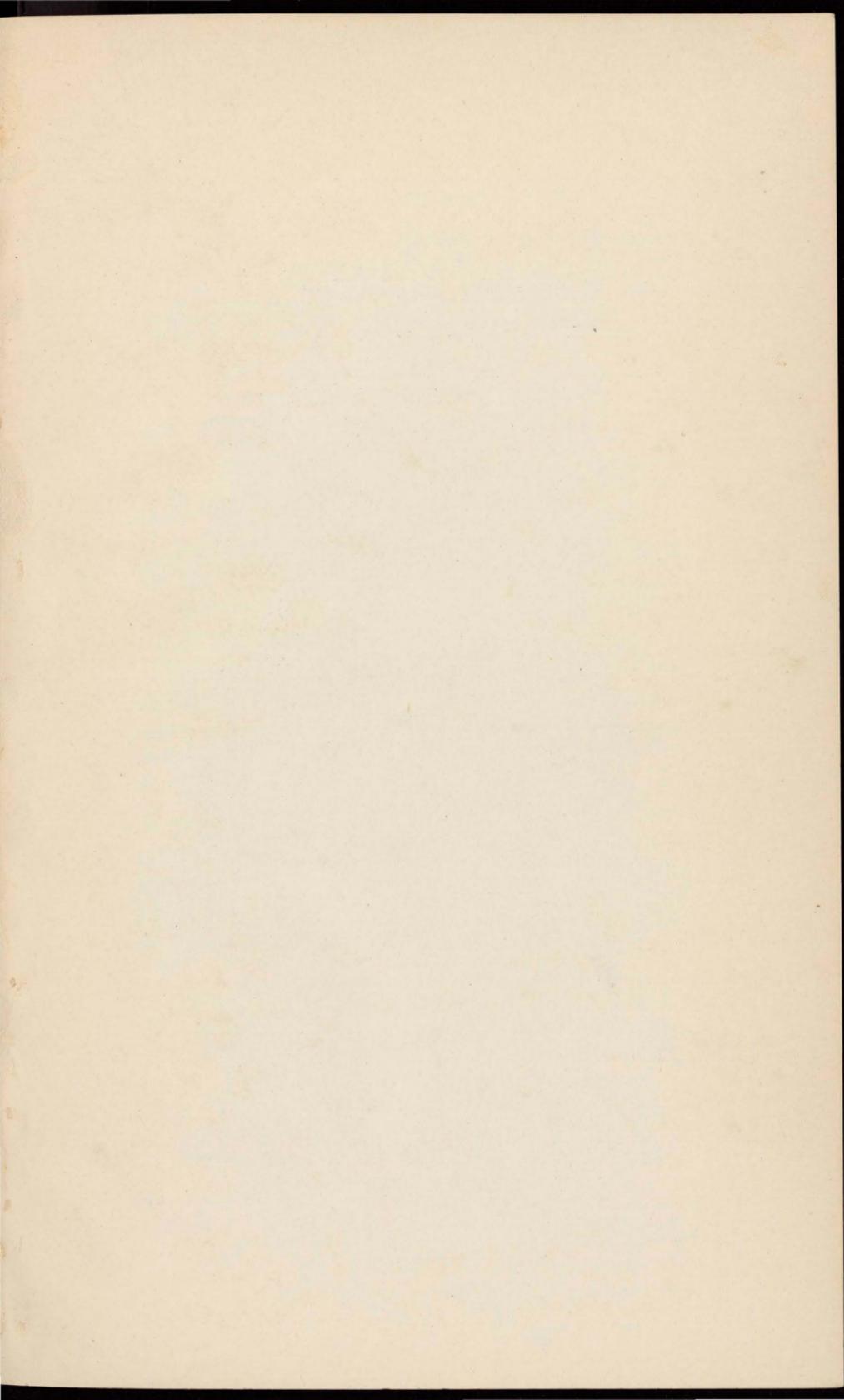
It cannot be in any case injurious, though it may be unnecessary. I will guarantee that by this simple method, so easily followed, the scourge may be neutralized which is desolating the capital, and throwing alarm into our provinces. This assertion is made on the strength of my own experience, and on the success of a mode of treatment which has never failed in any one instance.

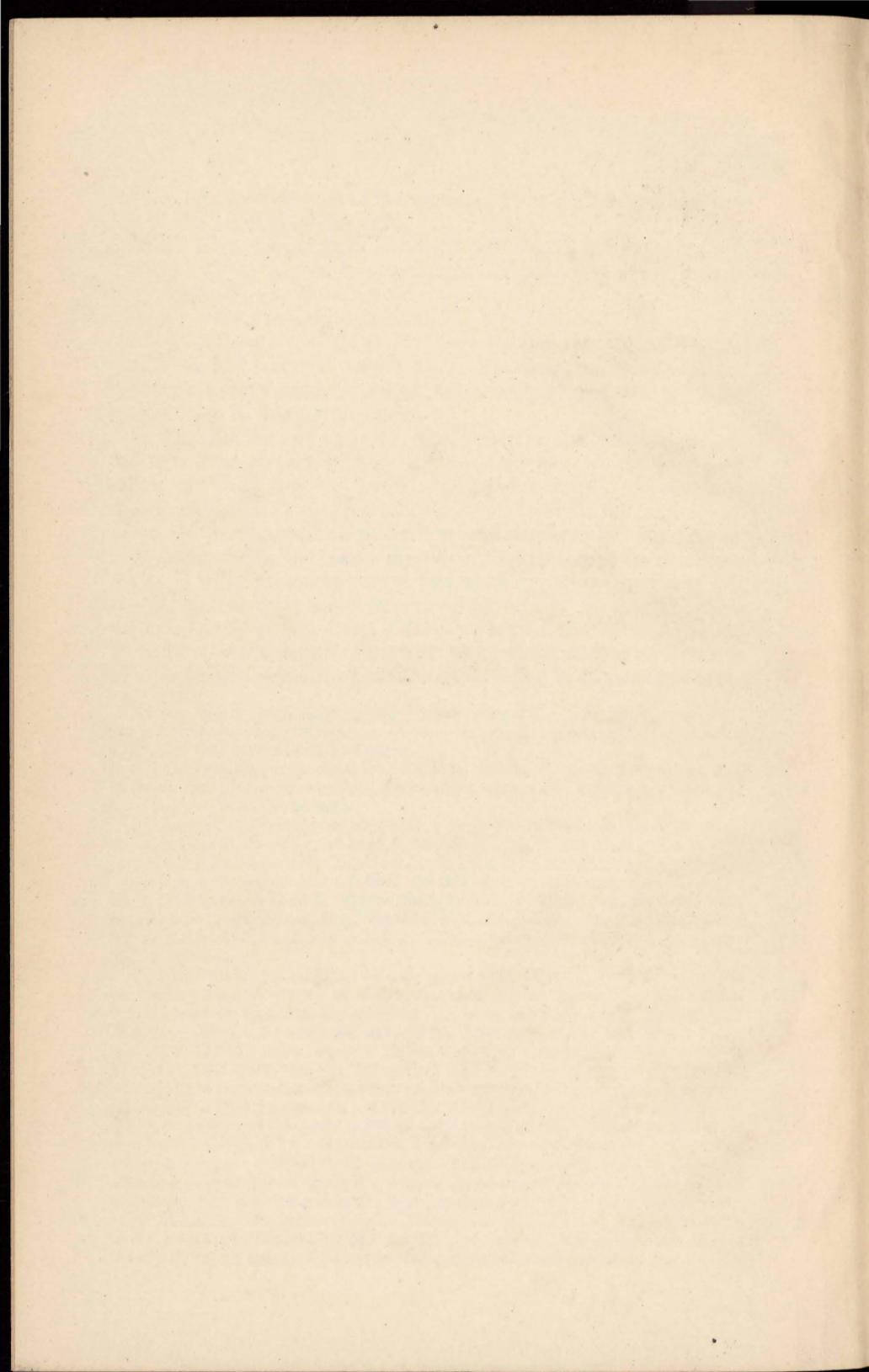
NOTE.—Since the foregoing pages were prepared for the press, this pestilence has made its appearance in New York, retaining the same distinctive character that it has done in Europe.

A highly intelligent medical friend states, that in all cases, as far as he has been able to obtain information, the violent symptoms have been preceded by a looseness of the bowels.

In the cold stage immediately apply a strong heat over the whole body, as we have before directed; or heat a two pail kettle full of water, put in it, if it is at hand, half a pound of pearlsh, wring blankets out of the hot water, and spread over the whole body, folded several times so as to retain the heat; as soon as they begin to cool, remove them and apply others. At the same time give 15 grains of calomel with 8 grains of Dover's powder; or from 10 to 20 of the former, and 8 to 12 of the latter. Afterwards give a dose of castor oil to aid its operation.

Constant and small sippings of thin arrow root, slippery elm tea, &c. given hot during the cold stage; or if the stomach rejects the drinks, omit them half an hour or more, till the warmth has been restored to the surface, and then give them. As soon as warmth has been restored to the skin and extremities, and the pulse becomes full and strong, bleeding is recommended. If the calomel starts the bile, the patient will be likely to recover. After the cold stage is removed, a violent fever soon comes on, which requires a cooling, instead of a heating process. Keep the whole body constantly wet with the alkaline wash, and the body covered only with a sheet, in order to moderate and lessen the heat by evaporation, from the surface. Keep the heat of the body as near as possible at the natural standard, carefully avoiding either an increase or diminution, for it is a doctrine sanctioned by the highest medical authority, that the secretions are best promoted when the heat is at the natural standard. By persevering in this method of treatment, if the cold stage is early removed the patient will be likely to recover, but if it is not immediately done, all means afterwards will generally be unsuccessful.





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