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IS ASIATIC CHOLERA CONTAGIOUS?

[Read before the Providence Medical Association by H. W. KING, M.D., Surgeon-General of Rhode Island, and communicated for the Boston Medical and Surgical Journal.]

THIS question is now of public interest, in view of the anticipated coming of the disease. Doctors disagree upon it. This is no new phase in the history of medicine. Doctors have disagreed as to the contagiousness of nearly all diseases which are most strongly influenced by epidemic conditions. It is so difficult to determine which is the prime source of disorder, when both contagious and epidemic causes are operating! Hospital gangrene, puerperal fever, yellow fever, scarlet fever, typhus fever, hooping cough, and plague were for a long time held in doubt, and finally, after hot dispute, quietly found place, one by one, in the list of contagious diseases.

Cholera is most prominent among those of which we are still in doubt, and about which we may dispute. I purpose briefly to examine a few of the reasons recently given to the public why some "physicians cannot believe cholera to be contagious," and to extend a few remarks upon the subject of contagion.

First. On board the steamship Atlanta, which brought the disease to New York last November, it was confined to the steerage during the whole passage. The fact that the disease did not spread to other parts of the ship is relied upon as evidence of its non-contagious character.—It would seem to me, better evidence of its non-epidemic character. This fact, which is thought too singular for a freak of contagion, has had its parallel many times in the passage of typhus fever to our shores, and no doubts are now entertained as to the contagion of typhus.

Second. The Emperor of the French, holding the destiny of the nation, "was permitted," recently, to visit the cholera hospitals of Paris, and did not take the disease. This act of the emperor is considered proof that both he and his medical advisers believed the disease to be non-contagious; that the possibility of his taking it was not even doubtful.—Does it prove so much? The French once had another emperor, who, with responsibilities as great upon him as ever rest-

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ed upon his nephew, was permitted to cross a bridge at Lodi, swept by thirty Austrian cannon. Does this prove that he and his military advisers were satisfied that there was no danger in the passage? that the possibility of his being hit was not even doubtful?

Third. In India, where the disease has become naturalized, and has prevailed for a long time, the belief is universal that it is not contagious.—The same argument would prove the plague to be non-contagious, while we all hold the contrary. That too is a habitat of the East, and like views are entertained of it there.

Fourth. Cholera can be arrested in its progress by proper medication, and the question is asked, "Is this true of smallpox, or any other confessedly contagious disease?"—It may not be true of smallpox, but it is true of many other confessedly contagious diseases, among them itch, syphilis and porrigo.

Fifth. In cholera there is no definite period of incubation, nor any regular stages of development in its progress and decline, while it is asserted in all known contagious diseases these stages are generally clearly marked.—Is this statement true? Let us examine and compare it with the teachings of one of the best of American authors. Dr. Wood says of pertussis, "The period of incubation is from two to thirty days;" of measles; "from one week or less to three weeks or more;" of scarlet fever, "two or three days to two or three weeks;" and of typhus fever, "from immediately to several months." Each of these, in its progress and decline, is as irregular as in its development, and these are all well known contagious diseases. The period of incubation of the latter would seem indefinite enough to correspond with cholera or almost any other disease.

Sixth. "One attack of cholera furnishes no security against a second."—Neither does one attack of gonorrhœa, syphilis, porrigo, framboesia or itch furnish security against a second attack, and these are all contagious diseases.

Seventh. "Cholera remains quiet for a long series of years, almost constantly existing at the place of its origin, and does not extend beyond that region. Could this be true of any strictly contagious disease?"—It is true of the plague, and also true of typhus and yellow fever.

Eighth. It is stated that it is an established law of cholera that the prevalence of the disease is in inverse ratio to the height above the level of the sea, or large rivers, or bodies of water in the vicinity, and the question is asked, "Was it ever known or suspected that any such law of elevation existed in relation to any strictly contagious disease?"—I answer, it is known that the same law exists in relation to the prevalence of nearly all disease, both contagious and non-contagious. The exceptions are those diseases peculiar to mountainous regions. This idea, now advanced by Dr. Snow, was used by Dr. Rush in his argument against the contagiousness of yellow fever. It is answered by stating the fact, that the law of elevation in rela-

tion to the prevalence of disease follows the law of settlements. The population of the world is so distributed.

Ninth. "Cholera is uniformly checked in its progress by cold, and prevails most severely in hot weather. Smallpox, on the contrary, and other contagious diseases, which do not depend upon actual contact, prevail most severely in cold weather."

How is it with yellow fever? It is uniformly checked by cold; indeed, it requires a higher temperature for its existence than cholera. The question of the contagion of this disease has been more fully discussed than that of cholera, and the professional mind is generally settled in the belief that it is contagious. This brings me to a point where theory might be introduced into the argument. Do not all contagious diseases dependent upon corpuscular origin prevail most severely in cold weather? And do not all diseases dependent upon cryptogamous agency for their cause prevail most severely in warm weather? The prevalence of cholera in Russia during the winter might tend to prove one part of this hypothesis. The life of the sporule may have been protected in the underground huts, at a temperature where germination could go on, while in the clear, cold air above no epidemic cause may have existed.

The most of the arguments advanced to prove the non-contagion of cholera may be summed up in this simple statement: Cholera is not contagious because it does not follow the same law that smallpox does; reasoning as though smallpox were the type of contagious disease, and judging all other diseases by it. As well might it be taken for the type, and other diseases judged by that. From what has been shown it would appear that cholera is not more anomalous than many other diseases known to be contagious, yet it is not contended that there is any general law governing contagious disease, for there is none. Each is peculiar to itself. There may be a resemblance in form, or kind of substance producing disease, that may be classified. We have contagious diseases that are known to be of animalcular origin, as scabies, dracunculus, pulex penetrans, &c. We have others that we know to be of fungous origin, as favus, syco-sis, porrigo, &c.; and others that we believe to be of corpuscular origin, as syphilis, hospital gangrene, smallpox, &c. In thus classifying we have a resemblance in the kind of *materies morbi* forming each class, and here the resemblance ends. As the disease produced by the *acarus scabiei* differs from that produced by the *filaria medinensis*, and as the disease produced by variolous matter differs from that produced by syphilitic matter, so may we expect cholera to differ from other diseases, though produced by the same class of contagious matter.

In many of the arguments upon this question of contagion there seems to be wanting a clear idea of the definition of the subject. The best definition that I have seen, and the one that seems to me to convey a near idea of what is generally understood by the word con-

tagion, is that given by Dr. Wood in his Practice of Medicine. In this, contagion is held to be nearly synonymous with infection, but contagion is allowed a broader signification, and to embrace the meaning of both terms, including contactual and remote propagation. An agreement in the understanding of terms, though we still might differ, would save many words in dispute. With the microscope we may hope some day to solve the mystery that now divides us. It seems no deeper hidden than was the poison of malaria before Dr. Salisbury discovered that, instead of its depending upon the decomposition of vegetable matter for its origin, it has its source in cryptogamic life. He or some one else may show that, instead of cholera's depending upon the "decomposition of filth," vegetable organism must exist in choleraic air, and that germ and human excrement are necessary for its growth.

INTERESTING CASE OF CEREBRAL DISEASE—TUMOR OF THE LEFT OPTIC THALAMUS.

[A FRIEND has kindly permitted us to print the following private letter, which will be read with much interest.—EDS.]

MY DEAR DR.,—The case of Mr. W. A. G.'s adopted daughter has proved fatal. The history is, in short, as follows:—She first showed some mental disturbance in June last; in July and August she was dull at times, at others excitable and wilful; at the same time she could not write well; then vision was disturbed. This was followed by a general affection of the right side of the body, arm, leg and tongue; the latter being thrust out obliquely. For the past two months the nausea, which has existed from early in the disease, has been very severe, especially in the morning. Pain in the forehead, severe at times, and occasionally giddiness, followed by loss of consciousness for about five minutes, never attended by convulsions. During one of these attacks, rather longer than usual, she died, November 27th.

The examination of the brain was made by my brother, Prof. Jeffries Wyman, yesterday, and the results were very interesting; they are, in short, as follows:—Nothing peculiar was observed until the ventricles were opened, when a larger quantity of fluid than usual escaped, of a natural color. On laying the ventricles fully open, it was seen at once that they were not symmetrical; the left was much larger than the right. The floor was rounded out, and the distinction between the optic thalamus and the corpus striatum of the left side was almost completely effaced. The plexus choroides of the left side ran obliquely across the floor of the ventricle over the rounded mass, and was quite different from that of the right; it formed, instead of the symmetrical V-shape, another $\wedge$, with one arm much longer and more oblique than the other. The fornix was pushed far