

forceps to the sides of the pelvis irrespective of the position of the head, a practice which I must regard as unscientific and often very detrimental." Prof. Hodge also strongly favoured the use of the forceps in moderately contracted pelves, over the employment of podalic version, as more safe to the mother and child; provided there be not less than three inches in the conjugate diameter, and the instruments of suitable character. He was certainly very ingenious in contriving instruments for obstetrical purposes, and very successful in the use of them.

R. P. H.

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Ann. XXXIX.—*The Cholera Epidemic of 1873 in the United States.* Government Printing Office, Washington, D. C., 1875. 8vo. pp. 1053.

This portly volume, prepared in obedience to an Act of Congress, contains much valuable matter not strictly required by the enactment and not indicated by its title. It opens with a brief but excellent essay by Dr. John M. Woodworth, the Supervising Surgeon U. S. Marine Hospital Service, exhibiting the agency of the mercantile marines in transporting cholera to our shores, and making suggestions for prevention. Dr. Woodworth, as well as the other authors of this work, is a firm believer in the causation of the disease solely by the introduction of specifically diseased ejecta into the bodies of the new subjects. Outside of India, it is maintained that cholera passes from place to place and from person to person only by and through the transportation and ingestion of matters from the stomach or bowels of its previous victims. While cholera excretions in their original wet form possess their infectious qualities only at a certain stage of decomposition, and are innocuous before and after that period, yet if dried during the condition of activity they may and often do preserve their baneful potency for many days or weeks. Instances of attacks of cholera soon following the unpacking of clothing which had been worn in some far distant land during epidemics of the disease, are very numerous and of unmistakable significance.

It is worthy of notice, in view of his very extensive researches and experience, that Dr. Woodworth has very great faith in the prophylactic power of sulphuric acid. In treating the developed disease, also, he believes this drug is the most successful.

The portion of this work indicated by its principal title occupies some five hundred pages. The congressional resolution provided for the appointment of an army surgeon, who should visit localities where the epidemic appeared early or with special virulence, consult and question the local health-boards and medical men, and learn by personal observation and inquiry the facts concerning its origin, character, and conditions. To this duty the Surgeon General appointed Asst. Surgeon Ely McClellan. Considering that the foci of disease to be examined numbered two hundred and sixty-four, and that the allotted time was only eight months, it is not surprising that Dr. McClellan was forced to avail himself very largely of the observations of physicians resident in the infected places. Circulars were sent out asking such medical men to communicate the particulars of the first appearance of the epidemic, its progress, peculiarities, etc., and to give some account of the sanitary condition and influences of the neighbourhood. In this way were collected, and are here presented, reports from separate counties, towns, and cities, in the score of States visited by cholera in 1873. These are generally very full and satisfactory. In many cases the physician writing was connected with the local health-boards.

The great cities of the South and West were visited in person by Dr. McClellan, and the history and conditions of the epidemic carefully studied.

Several admirable chapters present the general results of the whole investigation. One of these gives a brief clinical history of the epidemic. That the disease was nothing less than the regular, malignant, Asiatic cholera, is stated, to be unquestionable. The knowledge and use of sanitary and preventive measures, rather than any modification of type, are the means which limited its ravages in the great cities. A condensed statement of the symptoms, stages, and sequelæ, of the disease in 1873, is followed by some twenty-five typical cases, reported by different observers.

Treatment, as might be anticipated, was found to be extremely varied. Calomel, however, was used more than any other drug. Used with opium it was undoubtedly of extreme use in arresting the premonitory diarrhœa. Of the cases of developed cholera reported, those treated by calomel alone exhibit a mortality of 23 per cent.; by calomel and opium, 31 per cent.; by these with acetate of lead, 40 per cent.; by opium, calomel, and stimulants, 50 per cent.; and by stimulants alone, 59 per cent. "Preparations of iron" are credited with a mortality of only 33 per cent. The number of cases subjected to the "acid treatment" was only 64, of which 8 per cent. died. The total mortality among the 7356 cases collected was 52 per cent. The experiments of Nedswetzky, in 1873, are here given, showing the effect produced upon the bacteria of cholera dejectious by the addition of various drugs. Tannic, sulphuric, nitric, and muriatic acids, chlorino water, chloroform, and sulphate of iron, killed the micrococci promptly. Other drugs used for cholera did not destroy vitality, though applied very freely.

A chapter upon the etiology of the epidemic is remarkably clear and conclusive. The facts are exhibited in the form of concise propositions, with the evidence establishing each. That all predisposing or favouring causes of cholera will fail without the necessary infectious particles from a previous case; that these particles are capable of diffusion in many ways, both well known and little suspected; that this epidemic and all similar ones are traceable to imported infection; and that the virulence of the epidemic once started is largely dependent upon the hygienic surroundings, these are some of the principles which seem there to be clearly proved. As a matter of fact, Dr. McClellan does not hesitate to assert that this epidemic was due to infected fabrics in the luggage of emigrants from cholera districts in Europe; and that it was more than once reënforced in the same manner during the summer of 1873.

The general character of the author's next chapter, upon preventive measures as illustrated by the facts of 1873, may be inferred from what has been already written. A national sanitary bureau, one of whose functions should be the forwarding of local boards as to the emigrants about to arrive by a certain ship, when it has learned that these are from, or have passed through, infected districts, is one measure here earnestly recommended. The all-important matter of quarantine should not be left to the varying theories and practices of different health officers, but should be governed by uniform rules founded on the fullest knowledge of the disease. Persons arriving in a community from an infected district should be subjected to close surveillance. They should be compelled for a time to use a carefully disinfected privy, and if any suspicion exists that their clothing may be contaminated, this should be purified by hot air and other ordinary means. The time for preventive measures is before the cases have become numerous. Experience teaches that after fright and panic have obtained sway, sanitary precautions cannot be enforced. Popular appreciation of the actual facts as to the infectious

character of the disease will not cause terror and the abandonment of the sick, but rather will lead to the use of those means which will surely limit the epidemic and curb the ferms which were due to ignorance.

The sanitary measures adapted to towns, households, and individuals, are briefly but well set forth. Great stress is laid upon the possibility of infection from contaminated water. The united use of filtration and boiling is believed to render safe water otherwise unfit for drinking.

In a very curious and interesting chapter illustrated by maps, Dr. John C. Peters traces the route pursued by the epidemic of 1873. He shows that cholera was brought into Persia from India, by the innumerable trains of pilgrims and traders, in 1867, in 1868, and in 1869. In the latter year the disease appeared in Russia, first in two cities which were visited by great numbers of pilgrims and traders from Persia and elsewhere. After several months it reached Moscow, and, in August 1870, broke out in St. Petersburg. In short time it became widely diffused throughout Eastern Europe. By 1873 the epidemic had extended its ravages over the western portions of the continent, and reached our shores to the persons and effects of emigrants.

We now come to Part Second of this great work, being a History of the Travels of Asiatic Cholera, prior to 1873. This portion is the joint production of McClellan and Peters, the latter dealing with the disease as it prevailed in Asia and Europe, while the former describes the course of American epidemics. A chapter is assigned to manifestations prior to 1817; and one to each of six great visitations of the disease subsequent to that date. These accounts are well illustrated by numerous maps. The histories of the more recent epidemics are, to a certain extent, histories of medical opinions as to the origin and communication of the disease. As such they are extremely interesting.

A chapter upon cholera in India graphically portrays the manners and customs of the people among whom the disease originates and is ever present. A mere sickening picture of superstition, ignorance, filth, and suffering, cannot be imagined. The circumstances of almost incredible foulness and unhealthfulness which surround the people in their homes, are intensified tenfold when they flock in scores and hundreds of thousands to the countless shrines which demand their worship. The horrors of the long and weary journeys, and of the protracted sojourn near the holy places, are too repulsive and pitiful to be described. The mortality attendant upon these pilgrimages is perfectly frightful.

The third grand division of this work is by John S. Billings, M.D., Asst. Surgeon, U. S. A., under the title of "Bibliography of Cholera." There is here presented a list of books, essays, and articles in journals, wholly or mainly relating to cholera. The length of the list is appalling. It occupies over three hundred pages, and must contain six or seven thousand references. The matter is classified in a convenient and thorough manner. It represents an amount of hard work painful to contemplate, and not of the sort to win applause from the multitude. Yet the patient industry here expended makes smoother the pathway of all subsequent investigators.

The entire work is a credit to its authors, and one to which the profession may point with justifiable pride. Its mechanical execution, however, is far inferior to that of the Medical and Surgical History of the Rebellion, also published by Government, and is not so good as the subject-matter deserves.

B. L. R.