CHOLERA: ITS ÆTIOLOGY, CONTAGIOUSNESS, AND TREATMENT

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AND

TREATMENT

BY

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"Dira lues.
Sua cuique domus funesta videtur.
Et quis causa latet, locus est in crimine notus.
Semianimes errare vias, dum stare valebant
Aspicerес; flentes alios, terræque jacentes;
Lassanque versantes supremo lumina motu."—OVID.

LONDON
J. & A. CHURCHILL
11, NEW BURLINGTON STREET
1883

AUTHOR OF

'APOPLEXY (CEREBRAL HÆMORRHAGE): ITS PATHOLOGY, DIAGNOSIS, THERAPEUTICS, AND PROPHYLAXIS;'

'PATHOLOGICAL CONTRIBUTIONS TO MEDICAL JURISPRUDENCE;'

'THE PATHOLOGY OF ANGINA PECTORIS;'

'THE ÆTIOLOGY OF PULMONARY APOPLEXY;'

'NEW BRIGHTON: ITS SANITARY ASPECTS AND MEDICAL CLIMATOLOGY;'

'AN OBSOLETE MATERIA MEDICA;'

'THE AGE OF CLAY—A RHYTHMIC SATIRE;'

ETC., ETC.

PREFACE.

Few of the present generation of medical practitioners have had opportunity of observing cases of Cholera. Amongst the majority, a tendency exists to entertain views *a priori* in favour of its contagiousness. This was amply manifested some years since during a debate on the subject at the Harveian Society of London. Men of wider experience, however, both in India and England, are inimical to the theory. Emphatic expression of this more matured opinion is important, by imparting confidence to nurses and others attendant upon the sick.

With regard to therapeutics, most is to be expected, in future visitations of cholera, from rational employment of the hypodermic method.

New Brighton,
Cheshire.
August, 1883.

CHOLERA:

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Ætiology.

Of the intimate cause and essential nature of cholera we are yet ignorant; nor does clinical or post-mortem observation appear to render its pathology more definite or satisfactory.

We observe a train of phenomena varying in character and intensity in particular cases; but the study of symptoms during life does not enlighten us as to the seat of the disease, or aid us in the establishment of rational principles of treatment. In fatal cases we discern no anatomical lesion, and beyond more or less marked pulmonary collapse and venous congestion, there is exhibited no appreciable alteration of the viscera. The flocculent ingredient giving rise to the characteristic rice-water, or "congee" evacuations, which has been supposed to contain some entity having an influence on the causation of cholera, was long since pointed out by M. Boëhm, of Berlin, to be merely the rapidly shed epithelium of the alimentary canal, and Dr. Hassall's minute microscopical examination of the blood, urine, epidermis, and clothes of patients failed to detect anything unusual. In like manner, the fungi and vibriones detected in the atmosphere, air passages, alimentary tube and discharges, have been also found in the larynx and contents of the intestines of healthy persons by Dr. Hassall, Mr. Rainey, and other investigators.

But many other diseases are characterised by like obscurity of origin, like negation of evidence on autopsy, though they have not demanded so much attention, owing to the infrequency of their occurrence, or to their being less deadly, or

less rapidly fatal in progress. The stomach and intestines, liver, spleen, and other viscera have been respectively considered to be most implicated or concerned in the evolution of the disease, the organ in question being conceived to undergo some vital or functional perversion in consequence of the action of a specific *materies morbi*. Many, as Mr. Grove, have ascribed this to sporules or animalcules suspended in the atmosphere, or drinking-water, and Dr. Sansom has revived the opinion, as he holds that the cholera germ is *organised*; and that it *lives* and *grows* and *multiplies*. Mr. Grove maintained that to "*some form of life* (most probably vegetable) the principle of epidemic and infectious diseases is to be referred; that the predominant or governing influence is due to reproduction, and that it is during the exercise of the reproductive faculty of the poison germs that the phenomena of acute disease are manifested." Still more recently Dr. Déclat and other French physicians strongly support the "fungoid" theory; but, although this doctrine is attractive and plausible, it presents numerous fallacies, and is altogether undemonstrable, as I have already noticed. Others assign the disease to volcanic or electrical conditions, and deduce scientific inferences from the state of the atmosphere, which prove on analysis to be merely circumlocutory avowals of ignorance, though the meteorological observations of Mr. Glaisher—an epitome of which will be hereafter given—are of interest, as they hold out a hope, in the future, of throwing a light on the origin of the epidemic. Again, the disease has been deemed by some to be dependent upon malarious or miasmatic agency, to which the spleen is considered to be specially obnoxious. In support of this the spleen may undergo some functional change in cholera, as the blood presents considerable alterations (such as increase of its corpuscles and viscidity, and diminished and diffluent condition of its fibrin), over which fluid this organ is regarded to possess great and peculiar influence. According to Mr. Gray, the spleen regulates the *quantity* and *quality* of the blood; but after extirpation, which does not inconvenience the animal, the increase of blood is equally distributed over the whole system, so that the vessels contain more than under ordinary circumstances. Of course,

the viscidity of the blood is mainly due to separation of its watery constituents; but may not this viscidity be dependent (it is asked) on perverted action of the spleen failing to maintain hæmostatic equilibrium, and consequently favouring elimination of the thinner portions of the blood by the alimentary canal? If this theory be accepted, the analogy may be carried further, and cholera be regarded as a species of intermittent (Dr. Billing), the cold fit of which becomes developed, but it is not succeeded by the hot stage, in consequence of the concentrated or more subtle action of the malarious poison. The secondary fever, however, if collapse be recovered from, may be viewed as the analogue of the hot stage. Ague districts are said to be not particularly liable to visitations of cholera, though, if visited, the disease has been reported to rage with peculiar virulence; but such facts do not militate against the theory, as the diseases are presumed to be similar, not identical, in their mode of generation. But it is impossible to reconcile what has been observed relative to the origin and propagation of cholera with such a theory; there is complete absence of evidence in its favour; and lastly, the splenic derangement which is the *effect* of intermittents cannot be fairly, according to such a method of reasoning, considered, if it exist, as the *cause* of cholera.

Numerous authors maintain that the disease is *always* traceable to impurities in the water of the district; but this fails to explain its appearance or production under circumstances where the water has been avoided, or found free from noxious ingredients, and although there is great truth, there is probably not the whole truth in this view, as water only proves a source of cholera under certain conditions, which will be more fully alluded to. Even Dr. Snow, the great advocate of this theory, was unable to explain all circumstances connected with the visitation by the aid of the water theory alone; yet it must be admitted that in several instances, as during the memorable outbreak near Golden Square, in 1854, and in East London in 1866, the introduction of impure water into the system was almost mathematically demonstrated to be the chief, if not the sole agency in the development of the disease. Very many other examples might be quoted in proof of the