

such ambiguity and contradiction, I can only think of two reasons. Partly, no doubt, there exists the belief that on general hygienic grounds no stone should be left unturned in order to procure a good supply of water where it had previously been bad, and thus the fear of death and the devil proves stronger than the love of truth and God. Again, the drinking-water doctrine appears to many to be the lesser evil as compared with the threatening local and periodical predisposition, which implies a more mysterious and less definable conception. They imagine that the (to them) uncomfortable facts of time and place may be explained on the drinking-water doctrine. The places where the cholera excreta can contaminate the drinking water have a local disposition, and the times at which even cholera prevails, and excreta may contaminate springs and water-courses have to do with periodical dispositions, and thus they escape from explaining the subtle influences of soil and ground water. But any one who thoroughly investigates the local and periodical factors in epidemics of cholera must reject such an explanation. A study of the tables previously given from Brauser places great obstacles in the way of accepting these doctrines. The constant periodicity of cholera in Calcutta or Madras can not thus be cleared up. In the same way it is impossible to understand on this doctrine how it is that the hot, dry season, which must be destructive to the bacilli, is the period during which cholera is most prevalent, and how it is that the hot and wet season, which is favorable to the growth of bacilli, cholera is at its lowest ebb. That cholera and typhoid fever are more flourishing when the ground-water is sinking than when it is rising has been explained by the drinking-water theorists on the view that when the ground-water is falling it becomes more concentrated, thicker, and therefore more dangerous. Now, the prolonged researches of Wagner, Aubry, and Port have proved the direct opposite. When the ground water is low it is always purer than when high. Dr. Port has studied for a number of years the state of the water in the garrisons of Munich, with a view of watching its relations with the movement of typhoid fever, and he has found that when the water began to be impure then a falling off in the disease might be predicted. Why this should be so has received an experimental explanation from Dr. Franz Hoffman. Great and

numerous are the objections to the explanation of the local disposition to cholera by means of the drinking-water doctrine. Lyons was until the year 1858 supplied with water from superficial wells. The analyses of the waters from a number of the wells prior to the introduction of a better supply would astonish any one. The contagionists get out of their difficulties by merely asserting that though it is always the water which transmits cholera, yet there are a thousand ways in which this may be accomplished. But we have already shown that severe epidemics may occur without drinking-water being implicated, and consequently it is questionable whether, in those epidemics where the water may have been a factor, other causes did not play a more important part in the development of the malady. It is for the contagionists to prove why the infection by drinking-water can only be verified in some cases. The most popular argument of the contagionists is the proposition that cholera spreads by human intercourse, a fact which I unhesitatingly accept. But the interpretation which the contagionists put upon the fact is nullified by the fact itself, as is shown by a closer study of all the influences of intercommunication, whether by land or sea.

#### HIGH AUTHORITIES ON THE PREVENTION OF CHOLERA.

At the Parkes Museum, London, in one of a series of popular lectures dealing with precautions against cholera, in December last, Mr. Ernest Hart declared that European quarantine by sea, and land quarantine in any case, had invariably proved not only useless in preventing the extension of disease and loss of life, but cruel and mischievous, and had greatly added to the misery and suffering due to outbreaks of cholera. He condemned the attempts at quarantine practiced in France, Italy and Spain as being contrary to the experience and the knowledge of facts, as well as to science. Quarantine, he maintained, had never kept cholera out of any European country, nor limited it to any European district. The prevalence of typhoid fever was, he once more declared, the true index of the liability to Asiatic cholera. Wherever typhoid prevailed, there the local conditions existed which would favour the propagation of cholera; and, until typhoid fever disappeared from among us, we could not consider ourselves free from the risk of the importation and the propagation