# BRITISH MEDICAL ASSOCIATION.

## FIFTY-FIFTH ANNUAL MEETING.

### *PROCEEDINGS OF SECTIONS.*

## ON SEA-BORNE CHOLERA: BRITISH MEASURES OF PREVENTION v. EUROPEAN MEASURES OF RESTRICTION.

*Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association held at Dublin, August, 1887.*

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THE epidemic of cholera in southern Europe during 1884-87 has once again brought into prominence the question of the best method for preventing the extension of that disease; and since the United Kingdom of Great Britain and Ireland has now finally determined on the adoption of a system of prevention which is in distinct antagonism to that which finds favour in so many parts of the continent of Europe, and especially amongst some of the Mediterranean Powers, I have thought that it might be of interest to those who are gathered here to-day, and who in one way or another are concerned in the promotion of the public health within this realm, if we took note of the attitude which we as a nation have taken up in this respect, and endeavoured to apprehend its value and significance in the light of the events of the past three years.

I need hardly remind you that the subject has been regarded as one of such international importance that the civilised nations of the world have on several occasions sat together in council with a view to the adoption of a universal code of regulations. The three most prominent of these gatherings have been the International Sanitary Conferences of Constantinople in 1866, of Vienna in 1874, and of Rome in 1885. The latter I had the honour of attending as one of the delegates of the British Government. But no international understanding has been arrived at as the outcome of either of these assemblies; a negative result, which I believe to have been in the main due to the fact that the end aimed at has been sought in two diametrically opposed methods.

The one method, which is essentially restrictive in character, has always been advocated by several of the governments of southern Europe, France always taking a prominent lead. The other, which is essentially preventive in character, has always been aimed at, and more or less insisted on, by this country. The one is the quarantine system, the other is our system of medical inspection and isolation. The one says to cholera: "Hither shalt thou come, but no further;" the other, based on experience as to what is practicable in controlling the march of such a disease as cholera amongst civilised communities, has above all things aimed at the removal from the midst of the people of those conditions which are essential to the spread of the infection in question.

Measures of land quarantine, by which it is sought to stay the spread of disease by means of so-called sanitary cordons and threats of rifle-bullets, although still resorted to in moments of panic, have been so often condemned as useless by sanitary authorities in nearly every part of the civilised world that I shall not discuss them here. It is, in all probability, from sea-borne cholera that Europe now runs the greatest risk, and I propose briefly to discuss the application of the two methods I have named to the control of that disease coming by way of the sea.

What does maritime quarantine really mean and involve? The last International Conference that concluded its labours was the one held at Vienna in 1874, and for those nations preferring to trust in quarantine, the period for its application was set down by that assembly as seven days. Under this system, vessels from infected ports, and in which a case either of cholera or of suspected cholera has occurred during the voyage, must discharge all their crews and passengers, healthy and sick alike, at some lazaret for a period of seven days. Theoretically, those landed are to be divided into groups, and if amongst any such group a case of sickness, held to be suspicious of cholera, occurs during the seven days, that group, or the whole if ungrouped, must be retained for a further seven days, and so on *ad infinitum*. Anyone communicating either with the ship or with the persons landed, is suspected, and must himself be placed in quarantine; and thus the absolute isolation of the ship, crew, and passengers, is aimed at. Apply the practice in fancy to such ports as Suez, Toulon, Southampton, London, and Liverpool, when cholera prevails in India, China and Tonkin. Vessel after vessel, troopships, mail-steamers, and merchantmen, pass as it were in one continuous line, from the east to these ports, conveying human freights often varying from hundreds to some two thousand a-piece. How is this endless line of vessels to be thus dealt with? The truth is, that not a single nation professing to put its faith in maritime quarantine has ever made so much as an honest attempt to deal with the circumstances described, and the result is that when the system is applied, it breaks down at its most vital but its weakest link. A desperate struggle has been made to uphold this system in the Red Sea, professedly for the protection of Europe, and also in the Mediterranean, but the system is altogether delusive.

France, as I have explained, is a quarantining country, and in 1884 she had full knowledge of the fact that her ports were in constant communication with Tonkin, where cholera was then prevailing. This, however, did not prevent the importation of the disease into Toulon in June of that year. Thence cholera spread to Marseilles and other French cities and towns, until, by the close of the year, some 5,000 deaths had taken place, this being followed by a renewed epidemic in 1885. Italy, learning of cholera in France, at once imposed measures of quarantine on all her coasts and frontiers. But the disease passed freely through the barrier and entered by the sea—as well as by land—first attacking the coast and frontier provinces. By the close of the year her official record told of 14,299 cholera deaths, 3,459 more following in 1885, the disease being maintained during 1886, and even to the present date. Algeria, only approachable from France by sea, imposed stringent measures of quarantine at all her ports, but the disease made its way in by those very ports, and spread east and west along the coast line. Spain is a strictly quarantining country, and she, too, laid down rigid quarantine regulations against France, Italy, Algeria, and other countries. But cholera entered by a maritime province, the result being an initial epidemic in 1884, and no less than 119,620 deaths in 1885. So much for cholera prevention in countries resorting to their own approved measures of restriction.

But some say, "If cholera cannot be prevented from spreading when once it has been imported into Europe, let us at least check it in the Red Sea and prevent its entering the Mediterranean." Even our own delegates, whilst determined to discard quarantine for their own country, were not unwilling to authorise this experiment at the Vienna Conference, but overwhelming evidence has been accumulating since that date to prove the futility of the measure. A proper quarantine station in the Red Sea has ever been admitted to be the first essential for success by quarantining nations, and this especially since the opening of the Suez Canal. But to this day no such thing exists, and if the thousands on board the many transport ships, mail steamers, and merchantmen which pass from the East to Europe were really set ashore at the appointed places on the desert coast of Arabia, the result would probably be appalling. Even the most obvious sanitary requirements and the commonest decencies of life are absent. In the autumn following the Rome Conference, at which France again took the lead in advocating the quarantine system for repeated five-day periods, two French transports, the *Château Yquem* and the *Nive* were ordered into quarantine at El Tor on the east coast of the Red Sea. But as soon as the second vessel arrived the Director of the Encampment telegraphed that if there were any sickness on board it could only be aggravated by such a measure as had been ordered, and in the end, and apparently just to maintain an effete form, some of the healthy were landed, and the sick, with whom danger would presumably lie, had to be retained on board. As a matter of fact there was no cholera to isolate; but had there been, nothing could more have induced to the spread of that disease, and to favour the decimation of those landed on the wretched wilderness, alternately swamp and sand, which goes by the name of a quarantine station.

So far as this nation is concerned, I trust these antiquated measures have met with their death-blow; and in this connection I ask you to note what I believe to be an essential ground for some of the tenacity with which they are upheld—I mean their financial aspect. Last October information was received from Perim, at the entrance to the Red Sea, to the effect that four deaths from cholera had occurred on board H.M. troopship *Euphrates* since she left Bombay. On her arrival at Suez two convalescents still remained, and in accordance with regulations the ship and her complement of over a thousand persons was ordered 130 miles down the Gulf of Suez to the quarantine station. The answer of our Government was that unless the vessel

were allowed to pass into the Mediterranean, which she would do without communication with the shore, she would take the Cape route home. Now the prosperity of Suez, its canal and its staff of officials, is largely dependent on fees and dues, and immediately the imperative necessity of imposing quarantine for the protection of Europe at this her Eastern gate was ignored and the vessel was allowed to pass. The right for such passage is in effect what the British Delegation demanded at Rome. We were willing that each nation should make what arrangements it chose, whether in Europe or at Suez, for its own shipping and for the protection of its own ports; we were willing that our vessels should touch nowhere on their homeward journey, but we demanded that those sailing for our own ports should pass unhindered through the Suez Canal as an arm of the sea, to be dealt with on arrival at our ports under our own system of cholera prevention. Such are the essential features of the system of maritime quarantine; such are the results that ensue upon the pretence to carry out the process. The ten-days' quarantine advocated by the Constantinople Conference in 1866, has failed; the seven days', recommended at Vienna in 1874, has also failed; and yet a majority of the Technical Commission of the Rome Conference, acting on the initiative of France, could suggest no better international remedy than a still further reduction of the period to five days, the true nature of a vigorous quarantine detention being obscured under the name of "period of observation." Indeed, this very month the system is again being urged by France upon an International Conference sitting at Havre.

But what is our alternative system? Having deliberately abandoned the system of quarantine, we began, many years ago, to organise the system of medical inspection with isolation. The medical inspection comes first into operation on our coasts. The customs officers board the vessels coming into our ports, and they at once communicate to the sanitary authority the occurrence of any case of cholera, choleraic diarrhœa, or suspected cholera. A vessel so affected is detained until the medical officer of health has examined every member of the crew and passengers. Those actually sick of cholera or choleraic diarrhœa, are at once removed to the port sanitary hospital, and any person certified to be suffering from any illness which that officer suspects may prove to be cholera is detained for a true period of observation not exceeding two days. The medical inspection is thus followed by isolation of the sick. Unlike a quarantine system, this process does not interfere with the healthy, or expose them to risk by herding them together with the sick, but the names of the healthy and the places of their destination are taken down, and the medical officers of health of the districts in question are informed of the impending arrivals. This part of our system has been named our first line of defence, but it would be of but little value if we stopped there. Our main trust is in the promotion of such local sanitary administration in every part of the country as shall rid us of the conditions under which alone cholera can spread. In periods of emergency, as during the past three years, a special medical survey of such districts as seem most exposed to risk is organised under the supervision of a medical officer of the Local Government Board, and where needed the sanitary authorities are urged to action. Important as have been the results of the recent survey, they would go for little were it not for the steadily maintained work of sanitary authorities and their officers throughout the kingdom; and we who have been taunted abroad for opposing quarantine because its restrictions touched our commercial interests and our pockets may justly feel proud that in England and Wales alone the people have, during the past ten years, of their own accord, and apart from government dictation, spent, by way of loan or in current expenditure, over eighty millions sterling, for purposes mainly of a sanitary character. Indeed, we may fairly ask whether any corresponding expenditure has in other countries given evidence of real faith in a quarantine system.

The truth is that this kingdom still takes the lead as a progressive Power in the matter of public health. The cost incurred has been immense, but it has not been in vain or unremunerative. Our cholera death-rate, which was 30 per 10,000 in 1849, fell to 11 in 1854, and again to 7 in 1866. Since then we have laboured hard to prevent the disease from securing a footing amongst us; and though our labours are far from complete, and the disease has on several occasions been imported, yet it has each time been at once checked. Our "fever" death-rate, falling with the advance of sanitation, is now less than one-third of what it was before 1866; and our general death-rate has during the same period been reduced from about 22 to 19 per 1000. Public health has truly been said to go hand in hand with public wealth, and whilst our national prosperity has thus been promoted, the lives and the health of tens of thousands have been secured, whilst our fellow men have been largely spared that form of destitution and misery, which is the more burdensome because it follows in the track of preventable disease and death.

The system of quarantine has again and again shown itself to be impotent for good, and being so, its vexatious and inhuman characteristics stand out the more prominently. Above all, it has a blighting effect upon sanitary progress. So long as governments tell their peoples that a line shall be drawn around them across which disease shall not pass, so long will those people be reluctant to spend their money on the promotion of true measures of prevention. The quarantining countries are essentially those which cholera invades; taken as a group they are those where true sanitary progress is at its lowest ebb; and with the experience we have before us, I would, in conclusion, ask, much in the words I used at the Rome Conference: Is it likely that this nation will sacrifice her well-tried system of prevention for a restriction of five days' quarantine?

## CLASS-MORTALITY STATISTICS.

*Read in the Section of Public Medicine at the Annual Meeting of the British Medical Association held in Dublin, August, 1887.*

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THE subject of the varying rates of mortality among the different classes of society is one which is of the utmost importance to the medical officer of health, and therefore I avail myself of the opportunity afforded by the attendance of a large number of such officers at the Section of Public Medicine of this meeting of the Association to discuss some of the more salient points connected with "class-mortality" statistics.

It is especially appropriate that this subject should be discussed in Dublin, as, so far as I am able to ascertain, Dublin is the only locality for which class-mortality statistics are regularly published. Various attempts have been, from time to time, made to determine the rates of sickness and mortality among special classes of the community. These attempts have been usually made in connection with friendly, benefit, or insurance societies. I shall not attempt here to review these investigations—indeed, it is quite unnecessary to do so, as the work has been well done by others. I would especially refer to the recently published paper by Mr. Noel A. Humphreys, of the General Register Office (England) on "Class-Mortality Statistics" (*Journal of the Royal Statistical Society*, vol. l, part ii, p. 255, June, 1887), in which will be found a very full account of the work done in this direction by the late Dr. Farr, and more recently by his able successor, Dr. William Ogle, and by many others, whose names, though less familiar in our profession, possess the highest authority in the Statistical and Actuarial world.

I have referred to the fact that in Dublin regular class-mortality statistics are now published; these have been issued weekly since the first week of the year 1884, and it is well here to point out how it has come to pass that this system has been established in Dublin. On the approach of the census period of 1881, the Dublin Sanitary Association, having considered this question on previous occasions, called the attention of the Government to the great advantages likely to arise in the compilation of mortality statistics, provided a social classification of the population were made in connection with the tabulation of the census returns. The Association memorialised the Government with the view of having such a social Census carried out for Dublin. The Government acceded to the proposal of the Association, with the result that in the Irish Census Report for 1881 there are to be found tables in which the whole population of the Dublin Registration District is socially classified; this differs materially from classification by occupations. In classification by occupations all unemployed are necessarily excluded, and thus the great majority of married women and all young children fall into the class of those "having no specified occupation." In the social classification of the population of Dublin, all the members of each family are, as far as possible, included in the social class of the head of the family. Thus, a carpenter, his wife, and children, are all classed together, and we are able to ascertain not only how many carpenters there are in Dublin, but also how many persons are dependent on carpentering for their subsistence, and therefore belong—if we may use the phrase—to the social "species" carpenter; these combined with those dependent on other handicrafts forming the social group