CERTAIN DEFECTS IN THE PRESENT ORDER *RE* PLAGUE.

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SINCE plague began to spread from Asia the risk of its importation to this country has been ever present, and will probably shortly be accentuated by the return of troops from South Africa. The country naturally looks to port sanitary authorities to obviate this danger by dealing with infected vessels and persons at the ports of arrival, and a grave responsibility is thus cast on those authorities. This responsibility they have, at all events in the larger ports, endeavoured to discharge so far as their powers allow them to do so, but the important question arises whether the powers with which they are at present invested are sufficient to cope with all the methods by which plague may be introduced. Port authorities and their medical officers can only answer this question in the negative, for they are at present unable to take action with regard to several points of first importance.

It must be remembered that when the old Quarantine Act was repealed and the duties formerly carried out under that Act by the Customs were transferred to port sanitary authorities, the Local Government Board simply re-issued their existing regulations for dealing with cholera, and made them apply to yellow fever and plague. Now, the provisions of this Cholera Order were drawn up to deal only with a disease carried by men, water, or fomites, and to that end the Order has been proved by experience to be good and sufficient; but the provisions do not meet the case of plague, as they fail to recognise or provide against the far subtler possibility of the spread of infection by animals, and especially the introduction of the disease by means of infected rats. That introductions of plague by infected rats have taken place in other countries is a matter of common knowledge.

What are the duties and powers of port authorities under the present Order? Very briefly they are as follows: They shall cause every ship from a foreign port detained by the Customs as infected or suspected to be examined by the port medical officer; and that officer *may* examine any ship, whether detained by the officer of Customs or not, which he suspects may be infected or to have come from an infected port, with the object of ascertaining if such ship be infected. If the ship be found to be infected, then the provisions

of the Order as to the examination of every person on board, the taking and forwarding of names and addresses of persons leaving the ship, the removal of sick persons and "suspects," and disinfection apply. If the ship be not "infected," but has come from an infected place, all that can be done is to take and forward the names and addresses of all on board.

Under the Order a ship is defined as "infected" when "there is or has been during the voyage, or during the stay of such ship in the port of departure or in any port in the course of such voyage, any case of cholera, yellow fever, or plague." The power of dealing with a ship therefore depends upon the meaning of the word "case." Is a ship on which there are or have been rats suffering from or dying of plague "infected," that is, does "case" include a case of rat plague? Probably not, and if not, how are such vessels to be dealt with? Recently a grain-boat from Smyrna arrived after fifteen days' voyage at Bristol with crew all well. The ship was examined and supposed free from all infection. During the discharge of the cargo thirteen dead rats were found among the grain, twelve in one hold. A watchman had reported the first three found and bacteriological examination showed the presence of plague bacilli, Dr. Klein subsequently confirming the existence of plague in other dead rats. The ship was, rightly or wrongly, certified as "infected," and was fumigated before and after the discharge of the rest of the cargo, with the result that 226 rats in all were killed. All the 120 labourers employed were kept under medical observation for fourteen days, and fortunately none sickened. Precautions as to rat-guards, mooring, etc., had been taken since the arrival of the vessel.

It is obvious, therefore, that a vessel which on arrival appears to be free from infection may subsequently prove to be infected by rats, yet the port authority has apparently no power to deal with the ship in any way. Further, by the time the fact of such infection is discovered, rats from such a ship may have found their way on shore and have started an epidemic among the shore rats, the consequences of which may be far-reaching and disastrous. Nevertheless, the port authority has no power to require the adoption by the owners or captains of vessels from infected ports of precautions against the passage of rats from such ships to the shore, by keeping rat-guards fixed on all warps and cables, mooring the ship a reasonable distance from the quay-wall, and raising all gangways or shoreplanks at night.

If the country is to be protected with reasonable certainty against plague, it seems clear that the present Order for dealing with this

disease requires early amendment so as to provide and render obligatory precautions against animal as well as human introduction. The owners of a ship loading *for* an infected port should be required to destroy all rats on board previous to loading; and while loading *in* infected ports to provide and maintain rat-guards on all cables, etc., to moor the vessel away from the quay-wall, and to raise all gangways and shoreplanks at night. The definition of an "infected" ship should be extended to include one on which rats infected with plague have been caught alive or found dead. The port authority should be invested with power to require the adoption by the owners or captains of all ships from infected ports of such precautions against the passage of ship-rats to the shore as have been mentioned above, as well as with power to require the names and addresses of all persons working or being on board any such ship from the time of arrival onwards. This last power is important because the crew of a rat-infected ship does not necessarily come into contact with, or suffer from, infected rats; the real danger begins when discharge of the cargo commences and is primarily to the workmen employed in discharge. Further, in order to destroy rats, the authority should be in a position to insist upon fumigation of all vessels from infected ports after discharge of cargo.

The further powers indicated above would apply not only to "infected" vessels, but to those from "infected ports." It is therefore necessary that a list of such ports should be drawn up by some authority. Up to the present each port authority has adopted its own list, compiled from various sources of information, chiefly from newspaper reports. The Local Government Board have more than once practically refused to accept the responsibility of issuing an official list. A circular letter of that Board, dated December 9th, 1899, relating to the outbreak of plague in Portugal, contained the following: "It will be seen . . . that the officers of Customs will look to the medical officer of health to inform them from time to time of any particular ports or countries vessels arriving from which the medical officer of health may desire to visit, and in this connection the Board would observe that the earliest information which would usually be available to this end would be obtainable by a regular examination of the news telegraphed from abroad for the purposes of the daily press." It therefore appears hopeless to expect an official list from that Board. Whether it would be possible for the Association of Port Sanitary Authorities to appoint certain of the port medical officers who are members as a committee to draw up a list of infected ports, to be varied as occasion may require, and to send such list at short stated intervals to all port

medical officers for the guidance of their authorities, is a question which might well be considered. Uniformity of action in port administration is most necessary, not only as leading to increased security, but also in preventing unnecessary friction with owners and captains, who are much annoyed at times at having to adopt certain precautions at one port which are not required at another. It is necessary that the ports regarded as infected should be the same all over the country, and that the precautions against the passage of rats from ships to the shore should be made obligatory, and not left for adoption to the discretion of each port sanitary authority.

Another difficulty in working the present plague regulations arises from the uncertainty whether, as now worded, they enable ships from infected home ports to be dealt with in the same way as ships from foreign. It would be well if this point were considered in revising the regulations, so that there might be certainty on the matter. By Article 25 of the regulations every infected ship is during the day to hoist a distinguishing flag; but no provision is made for a night signal, the absence of which has been found a practical disadvantage. It would be well if provision for such signal, by means of lanterns or otherwise, were made; and, further, that the day and night signal should be borne not only by infected ships, but also by all ships from infected ports. In a crowded waterway it is often of great importance to ascertain easily which are the vessels needing examination.

Whether the cost of carrying out the regulations should fall entirely on port authorities is a vexed question. In the first place they are no doubt paying for their own protection, but they are also acting as a safeguard to the country, and are exposed to the risk of claims for compensation and to litigation. It at all events seems hardly fair to force on them the grave responsibility of stopping the entrance of plague, while practically tying their hands so far as dealing with the possibility of its introduction by animals, a mode of entry to this country which appears even more likely to occur than its conveyance by infected persons.

More could be said as to ways in which the hands of port authorities might be strengthened, but the main directions in which increased power is needed have been above indicated.