THE PLAGUE IN NORTH CHINA

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The plague is very properly divided into three types: the bubonic, or that from affecting the lymphatic system, which is usually the most common type; the septicemic, or that affecting the blood-system; and the pneumonic type, or that affecting the lungs more especially. The latter two types are usually most fatal.

The epidemic which was, in January, 1911, overrunning North China was of this last type—the pneumonic type—largely and of excessive virulence; although there were, as in all epidemics of this disease, some cases of the other two types, and more of the septicemic type than of the bubonic type. So far as our experience here is concerned—and that experience is confirmed by reports coming from other infected regions—scarcely any who have taken the disease have recovered.

The disease, so reports have it, has been found in sporadic cases, and even in small epidemics in southern Russia for several months, but the Russian authorities took strenuous methods to eradicate it and they had got it fairly well under control in Russia when in November, 1910, it was found to have come to Harbin. Harbin is in Manchuria, which, as is well known, is under the control of the Chinese government. Harbin is moreover on the Trans-Siberian railroad.

It is interesting to know how the disease got to Harbin. It is now believed that the disease was brought to Harbin through the infected hides which hunters and trappers brought to Harbin for market. It is known now that there was an epidemic among a certain fur-bearing animal, an animal something like the American muskrat, which the hunters of the north kill for the hides and sell in large quantities at Harbin. It has been found that the disease among these animals was due to plague; and the furs brought to Harbin for sale are believed to have brought the infection. Whether this be absolutely true, or whether the disease was brought to Mukden, Shanhaikwan, Tientsin, and Peking through persons traveling on the railroad cannot be stated definitely. The fact is that Harbin was the original hotbed of the disease. It spread from there in all directions, usually following the lines of traffic, the principal of which is, of course, the railroad. The city of Harbin is divided into a Russian, a Japanese, and a Chinese part. The Russians and the Japanese took strenuous measures at once to stamp out the disease in their quarters, and they have it well under control, in their respective parts of the town; but the Chinese problem was a much more complex one, and their people much more numerous and perhaps less enlightened; consequently, the disease got beyond their control and it was from the Chinese native city of Harbin that the disease spread. The thing to do would have been to stop all railroad traffic from that city early in the epidemic, but that meant, of course, great loss of money and much inconvenience; so it was allowed to go on until, I fear, it was too late, for this disease in January was found as far south as Chefu, and had got to several towns some distance away from the line of the railroads. This meant that it would spread inland, for the Chinese villages and towns are numerous and usually not far apart in this region, so that people traveling by cart and on horseback would spread it to other inland villages.

If the disease gets to Central China, where the climate is warm and damp, it will find a soil excellently adapted for the spread of the disease. It may die out here in

the North with the coming of the warm dry season, but with the coming of the wet season again it will be, doubtless, brought up from the south and central provinces again and practically become endemic unless the Chinese authorities employ most stringent methods to check the spread of the disease at once. It is due to them to say that they were in January rushing both foreign and Chinese doctors and assistants to the cities of Harbin, Mukden, Shanhaikwan and Tientsin, which are the largest cities on the line of the Imperial Chinese and the Manchurian railroads, but I fear that they waited too long. January is a most advantageous time of the year for the spread of the disease, for thousands of coolies at that time are returning from Manchuria to the provinces of Chili, Shantung, etc., after having spent a summer and fall in earning their bread in the wheat fields or lumber forests of Manchuria, and also because it is just about the time of the Chinese New Year, when every Chinaman who can returns to his home for the festive season.

But to get down to a few more specific data about this epidemic: 1. The disease started at Harbin. Up to January 24, 1911, about 1,500 Chinese and twenty-seven Europeans had died, of whom two were physicians and one an assistant. 2. The disease is met with, mostly, in the pneumonic and septicemic types. 3. Inoculation with Haffkine's antibubonic vaccines seems to be of considerable value as a prophylactic measure. 4. The administration of Yersin's serum in treatment does not seem to be of much value, although it should be said that it has not been given a full trial. If it were possible to take, say, forty or fifty cases and administer the serum to the patients and compare them with a like number that had not had the serum, we could say something more definite, but so far as I am able to learn this has not been done in this epidemic. 5. It has been conclusively shown that the disease, in the pneumonic form, is transmitted by the sputum and by contact with persons sick of the disease, and that the wearing of respirators is good prophylaxis. 6. The rat, or the rat flea, does not seem to have nearly as much to do with the spread of the pneumonic type of the disease as it has in epidemics of the bubonic type. 7. So far as I am aware this is the first definite epidemic of the pneumonic type of the bubonic plague. 8. The disease spread along the line of railway traffic from Harbin to Mukden, to Shanhaikwan, to Tientsin and to Peking and to several smaller places. It also got to Chefu, which is a seacoast town, probably through some Chinese coolies returning from the North in a Chinese junk or fishing boat.

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A HANDY POCKET CASE FOR BLOOD
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The inconvenience of carrying about the usual blood-pipette case and separate solution bottles has resulted in many efforts on the part of pathologists, hospital interns and others to devise a convenient means of collecting and carrying pipettes and smears of blood. The device herewith figured meets all the requirements in perhaps the smallest possible space, since the entire outfit may be comfortably carried in the vest pocket. As is easily seen from the illustration, the set contains two pipettes, a 2-dram bottle of alcohol in the stopper of which is mounted a long cutting-edge needle, two