

BUBONIC AND PNEUMONIC PLAGUE.

[From the *China Quarterly Journal*.]

GERM.—These two forms of plague are caused by the same specific germ, *bacillus pestis bubonicæ*, but the mode of infection, the symptoms of invasion, and the prognosis differ greatly. The plague bacillus may be found in all the fluids and organs of the infected body.

MODE OF INFECTION.—Bubonic plague is generally conceded to be transmitted through the bite of animal fleas, especially those infesting the rat and ground squirrel. More recently it has been thought that the bed-bug may also be a carrier.

There have been rare instances when a patient primarily ill with bubonic plague developed a septicæmic pneumonia, and infected another person with the pneumonic form. Very rarely, also, has it happened that during an epidemic of the pneumonic variety one or two cases of the bubonic form have appeared. Just how these exceptions to the rule occur is not yet fully understood.

Pneumonic plague is infectious through the respiratory tract, from the germs expired from the patient's nose and mouth (droplet infection).

PERIOD OF INCUBATION.—One to six days, the same for both forms.

SYMPTOMS OF INVASION: BUBONIC PLAGUE.—Chills, fever (105 or higher), intense headache, nausea, diarrhoea, swelling and pain in the inguinal, axillary, and cervical lymph glands. The severe cases are often delirious, the prostration is marked, and such types usually end fatally in from three to four days. In the lighter infections (and these are all that live), the temperature on the third or fourth day falls, to rise again on the seventh or eighth, when the swollen glands begin to suppurate.

PNEUMONIC PLAGUE.—Malaise, headache, pain in back, chills, low fever, oppression in the chest, respiration rapid, out of proportion to the fever and pulse rate (viz., T. 101, P. 100, R. 50). On the second or third day the patient begins to cough, expectorating sputum containing bright blood. Not until this sputum can be obtained, and examined, can a positive diagnosis of pneumonic plague be made, except by inference from known previous contact, during an epidemic, of such.

Treatment.—For both types, a rigid, single quarantine (each person in a room by himself) must be observed for three classes, namely: (1) Those already ill; (2) contacts with such; (3) suspects. All of these should be compelled to wear a mask (made from gauze and non-

absorbent cotton), completely covering both nose and mouth. All doctors, nurses, or others attendant upon any of these three classes, as well as any investigators working in the region, should wear large goggles with padded rims fitting close to the brow and temple, a mask as above, special plague suit, rubber gloves, and rubbers. (These last-named to avoid wearing holes in the cloth feet of the suit.) All the workers in an epidemic of bubonic plague should be inoculated with a prophylactic dose of plague serum, and all patients with a therapeutic dose. To date, in the pneumonic form, it has proved ineffectual, and it is by no means a certain preventive or cure for the bubonic form, but it is considered worth trying. Cathartics should be administered, avoiding the salines, however, in order not to rob the system of fluids. Easily digested, but nourishing, soft and liquid diet should be given, and a plentiful amount of water. The fæces, urine, sputum and vomitus should be efficiently disinfected. It is not necessary to go further into detail *re* the usual routine which would be followed for those in quarantine, to prevent the spread of contagion, as it would not differ for these diseases from that observed for any other virulently infectious disease. For the pneumonic form, various treatments have been tried, as the intravenous use of 606, and of normal saline, but with no apparent effect, except in some instances the seeming prolonging of life for a day or two. In the bubonic form, when the lymph glands come to suppuration, surgical interference is indicated, followed by the usual daily aseptic dressings. Every means should be used to build up the system, but, at best, these cases are months convalescing.

Prognosis.—To date, all cases of pneumonic plague have proved fatal, all forms of treatment ineffectual.

Probably 70 per cent. of the bubonic patients die. It is to be presumed that of the 30 per cent. who recover most will have been inoculated with plague serum, but it is not to be inferred that none of the 70 per cent. had it, for it is by no means a specific remedy.

In due time it is to be hoped that science will be able to perfect this serum, as many others, and enable the medical profession to better grapple with these deadly epidemics. Not a few doctors and laboratory technicians are devoting their lives to this end.

CARE OF THE BODY AND SICKROOM AFTER DEATH.—Immediately following death, a large sheet, wet with strong disinfectant, should be spread on the ground outside the house, the body placed in the centre, and wrapped

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