

Editorial

THE PRESENT EPIDEMIC

UNDER the name of "Spanish Influenza" an epidemic is sweeping over the North American Continent, more especially the eastern states and provinces of the United States and Canada, with an alarming morbidity and mortality. It is a rapidly spreading and very contagious disease which involves particularly the respiratory tract, but is associated with marked constitutional disturbances and prostration. It is said to have made its appearance first in Spain, hence "Spanish Influenza." It seems to have spread over the Continent and England where it still claims many victims. But it appears from the testimony of reliable medical witnesses that the disease in England is of a relatively benign type.

Its advent on this side of the Atlantic is of recent date. Here, as in other countries, the disease appeared prominently and severely from the start amongst soldiers, where it has been responsible for a high mortality. It appears from what reliable records are so far available that clinically, two types of cases occur—first, the simple non-pneumonic infection, secondly, the severe and frequently fatal, pneumonic type. This latter is a very dangerous, rapidly progressing, septicæmia with high fever, a curiously slow pulse, often running an erratic course, which may kill in a surprisingly short time. Between the two is no absolute separation; type 1 may either quickly or sometimes after days develop into type 2, and then rapidly lead to death. It may therefore be supposed, and this is practically the safest course, that in this, as in other epidemic diseases mild infections may, on translation into other individuals,

give rise to severe ones. It is noteworthy that the severe type affects with predilection young, strong and plethoric individuals, especially men. In them the prognosis is most unfavourable and the disease rapid. As regards the nature of the disease and the anatomical and bacteriological findings no definite final statement can as yet be made. Cases which have come to autopsy show generally a marked, diffuse, severely hæmorrhagic pneumonia, so that the lungs appear in recent state in extreme red hepatization, although the consolidation of the lung may not be complete. It is associated in practically all cases with marked sero fibrinous pleurisy. Involvement of the lung is frequently bilateral. Cases in which a more typical broncho-pneumonia occurs are much rarer. The larger bronchi and the trachea are also usually intensely reddened and inflamed, and occasionally may even show a croupous membrane. The throat, tonsils, and larynx are free. In addition to these lesions, autopsy shows the general results of marked septicæmia.

Bacteriologically, the cases appear to be mostly mixed infections. In the majority of cases the pneumococcus, in one or another strain, is recovered from bronchi, lung exudate, and pleural fluid. A number of cases also show influenza bacilli. The frequency of this finding, however, varies amongst various observers, and the proof that the bacilli found are definitely of the influenza variety has not always been furnished beyond doubt. Besides these two organisms various forms of streptococci contribute to the flora of the lesions. This is not the place to enter into a detailed discussion of these findings and their significance. Further, careful study is necessary before definite conclusions can be announced especially as to why the disease assumes in the present form such a malignant character. It may be that a symbiosis of several pathogenic micro-organisms such as influenza and pneumonia enhances the virulence of both.

One more word as to specific treatment of the disease. As might be expected the disease had not been long with us

in this country when announcements in the Daily Press of sera and vaccines appeared. These should be received with a great deal of reserve by the practitioner. In the first place, it has already been stated above that the nature of the infection as well as its extreme virulence in many cases is still obscure. In the second place it appears that most of these cases are mixed infections in which more than one micro-organism is concerned. Thirdly, even if it is taken for granted that the most important factor of this infection is the influenza bacillus, not much hope can be entertained in establishing immunity or cure by influenza vaccines, for the influenza bacillus has only feeble protecting qualities and stimulates but very feebly to anti-body formation, so that the agglutinative properties of the blood in influenza are not much more marked than in normal blood. Moreover, what little protection influenza vaccine furnishes is extremely slow in development; and finally, it is very doubtful whether in the human being any immunity is conferred by influenza infection. False hopes should therefore not be entertained by practitioners and laity that vaccine treatment is going to be of much help in this epidemic. On the contrary, it might even be that, if the vaccine be introduced into a patient ill with the virulent septicæmic type, aggravation of the disease might occur by exposing a body already swarming with dead and living bacteria to a further dose.
