Progress of Science.

PNEUMONIA—AN INFECTIOUS DISEASE.

We extract from the *Medical Record's* report of the proceedings of the third German Congress for Internal Medicine, held at Berlin, April 21-23, 1884, the following paper, by Professor Jürgensen, of Tubingen, on *True Pneumonia: Its Etiology, Pathology, Clnicial Course* and *Therapy.* *

The author gave a history of the growth of our knowledge of croupous pneumonia, and showed how opinions as to its nature had changed, until now the belief exists that pneumonia is a general infectious disease, the lung inflammation being only symptomatic. Experimental pathology had recently given indirect confirmation of this view.

The speaker then took up the alleged exciting causes of the disease, and showed that the facts regarding these did not conflict with the infection theory. Cold has been alleged to be a cause. At one time it was even said: "Frigus unica pneumoniæ causa." Different authorities reported cold to be a cause in between two per cent. and twenty per cent. of the cases. Jürgensen had in ten years' observation found cold as a cause apparently in ten per cent., really in only 4.1 per cent. It might easily be thought that exposure will produced a catarrh rendering easy the access of the infectious organisms of pneumonia.

It is a prevalent error, says Jurgensen, that pneumonia attacks by preference the strong and full-blooded. Among a population of all ages, three-fifths of the pneumonias occur in those between one and fourteen years, while twice as many occur after forty-five as between twenty and forty-four. Dittel found that the disease occurred in those previously weakened, in eighteen per cent. Flint, of Danemark, in twenty-one per cent.; the author, in 29.3 per cent. Immermann, of Basel, recently confirmed this view.

The disease has some relation to the meteorological conditions, being increased when there is increased humidity of the soil (Keller), and when the atmospheric precipitates are above the mean. These facts might be explained by the theory of an organic poison.

Pneumonia is *a disease of dwelling-houses,* like typhoid. Jürgensen had seen pneumonia in a dwelling in Amberg. Some time later the pneumonia cocci were found in the walls of the chamber. The disease occurred in epidemics, especially affecting single houses, or prisons, asylums, etc., etc. The possibility of direct passage of the disease from one person to another cannot be denied, but the occurence is rare. Flint, of Danemark, found some relation between earlier and later cases in two-thirds of his patients.

The question of the unity or multiplicity of the pneumonia poison would soon be settled.

Clinically, the disease presents great diversity even in the same families and sick-rooms. This the author was inclined to explain by assuming a variation in the extent of the development of the infectious poison. He believed that this poison, circulating in the blood, affected with special inflammation or disturbance other organs than the lungs. He cited thirteen cases of pneumonia with acute nephritis in which the kidneys were found to contain the special cocci. He believed that these produced special disturbance of brain membranes or stomach or other organs. Their development gave rise to the irregular curve of pneumonia.

Clinically, the disease may be separated into three great groups, first, those in which the general symptoms of infection; second, those in which heart symptoms; and third, those in which the lung symptoms are prominent.

In reference to prevention, the discovery of the coccus and the knowledge that it is a house-plant is of importance.

As to treatment, the author had tried iodine as an abortant without effect. The author gave a *Caution as to antipyretics,* considering them heart-depressants. He pleaded for prophylactic therapy, was doubtful of the ultimate value of bleeding, though it might temporarily relieve the heart. Finally, he announced the following conclusions: first, true pneumonia is an infectious disease, usually but not uniformly localized in the lungs; second, exposure to cold is a rare cause. The feeble are more susceptible to it than the strong.

Herr Frankel, of Berlin, continued the discussion, and took up the subject of the

Micrococcus of Pneumonia.—This coccus is distinguished from others by its gelatinous-like capsule which may surround two or more cocci. The capsules are not always present. The cocci are stained by a mixture of gentian-violet in water. Injected into rabbits they produce no uniform effect, in mice they cause pneumonia and pleurisy. In dogs, pneumonia is sometimes produced. The author found that variations in inoculation effects depended somewhat upon the cultures, which apparently had an effect of diminishing the virulence of virus. There was also another encapsuled coccus found in the human mouth, and which was the coccus of sputum septicæmia. The author announced the following theses:

1. The coccus of pneumonia, which may be isolated by pure cultures from the human being, is inoculable in various animals. Rabbits either prove refractory or become affected with severe general disease, with special localization of the virus in the internal organs—this depending on the mode of culture.

2. Further experiments must determine upon

* Many of our readers will be reminded by this paper, of a paper on the *Relations of Certain Filth Diseases to Cold Weather,* read before the American Public Health Association, in New Orleans, 1880, by A. N. Bell, with special reference to the zymotic origin of pneumonia. It is published in full in Reports and Papers of the A. P. H. Association, Vol. VI.; and in *The Sanitarian* Vol. IX; p. 78.—Editor.