

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 Frankei, of Belin, continued the discussion, and took up the subject of the *Micrococcus* of Pneumonia. This coccus is distinguished from other 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 the 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 what depends the varying virulence of the coccus. 3. The capsule of the cocci, as well as the "Nagelformige" growth of the pneumonia cultures, are not constant phenomena. 4. The capsules and the "nagelcultur" characterize other micro-organisms, and it cannot be said at present that the pneumonia cocci can be distinguished from them.

Herr Friedlander, of Berlin, said that the cocci of pneumonia were found in the blood during the disease. He had recently obtained the blood by wet-cups in six cases of croupous pneumonia, every precaution being taken to keep it pure.

The blood thus obtained was cultivated for cocci. In one out of the five cases these developed and showed their characteristic action when inoculated. Friedlander thought the capsule and the growth in "nagelform" very characteristic, but not sufficient for a positive diagnosis. The whole life-history must be taken into account. This life-history appears to differ, and this may account for the various forms of pneumonia and only one has the coccus; or in the different forms the same coccus has a different life-history. The chief efforts must now be made to follow out the different changes in the growth of the organism.

Dr. Gerhardt, of Wurzburg, accepted Jurgensen's view of the infectiousness of the disease. He accepted also completely the view of the unity of the disease, and considered it a happy explanation that the various complications of meningitis, pleuritis, etc., were due to local manifestations of the virus.

Dr. Frantzel, of Berlin, argued against Jurgensen's view that pneumonia was a house disease, citing its occurrence in military hospitals, and its frequency after open-air festivals and exposures. He thought the coccus entered the blood through the lungs. He explained the hæmadogenous jaundice of pneumonia by the theory that the cocci attack the red blood cells.

Dr. Rubile, of Bonn, contended that the view of the infectious nature of pneumonia was not so firmly established as its advocates assumed. It is necessary still to harmonize some of the known facts as to the etiology of pneumonia with the theory of a coccus. Besides, this coccus had not been found in all cases yet.

Dr. Rosenstein of Leyden, thought that "though croupous pneumonia may be an infectious disease in many cases, it is not in all."

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