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THORACIC PHENOMENA OF INFLUENZA,*

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In the early part of 1892, Pfeiffer, an assistant in Koch's laboratory in Berlin, discovered and described a bacillus which he claimed was the causative agent in influenza. Almost simultaneously the same organism was described by Kitasato and by Canon. A few months later, Klein of England, in a communication to the Government Board, corroborated the statements made by Pfeiffer and added that he had also found the bacillus in the blood. Not only had they found the bacillus in every case of influenza examined, but they had been able to produce the disease in susceptible animals, especially monkeys. Injections of cultures into the lungs through the thoracic walls, as well as inoculation on the nasal mucus membrane, produced attacks of the disease. The next communication of importance on the subject was by Drs. Parsons and Klein, in a Government Health report, referred to in the *Lancet* of August, 1893. Dr. Klein states that he only discovered the bacillus in the blood in a very few cases and adds in italics, "that any bacilli of influenza that may gain access to the circulation lose their vitality and are present in the blood only as dead bacilli." The report continuing, advocates caution in accepting this organism as the specific bacillus of influenza, on the ground that sufficient time has not yet elapsed to ascertain whether it can be found in any other disease or not.

Prof. Koch laid down three postulates which in his opinion any organism must conform to,

before it can be recognized as the causative agent in any particular disease. These were :

1st. The organism can be found in all cases of the disease.

2nd. It cannot be found excepting in this disease.

3rd. With pure cultures, the disease can be produced experimentally in susceptible animals.

So far then the organism described by Pfeiffer fulfils the requirements of the 1st and 3rd postulate, but more time is necessary before the 2nd or negative postulate can be proved.

The bacillus in question is small, not so large as that of mouse septicæmia, two or three times longer than broad, and staining with difficulty. It was found in enormous numbers in the sputa, the number varying with the degree of fever, the higher the fever the more bacilli. They were also found in the pus cells of the sputa. They could be cultivated freely in blood at the temperature of the body and were affected by changes in temperature and by drying.

Almost every disease to which the thoracic organs are liable may be set up, or, if already present, may be intensified, by the action of the influenzal poison. Bronchitis, lobar and lobular pneumonia, phthisis, abscess and gangrene, asthma, pleurisy in its different aspects, endocarditis, pericarditis, neuralgia, weak heart, and functional disturbance so called. This list is so extensive that I cannot pretend to discuss them all, but will attempt to deal with those of most frequent occurrence.

And first, a few words as to diagnosis. When are we justified in calling any disease of the thorax influenzal in character ?

1st. When the disease is epidemic there should be no difficulty in recognizing the condition, although I fear the mistake is sometimes made of calling everything influenzal. But sporadic cases occur after the epidemic has died out, which may be difficult to recognize.

2nd. When the sickness is introduced by an attack of those well-known nervous muscular pains, such as intense headache, backache and general soreness.

3rd. If the thoracic disease is accompanied or followed by a prostration out of proportion to the amount of local disease present, we would be safer to call it influenzal in character.

*Read before the Ont. Med. Association, June, 1894.