

The most important investigations which have been made so far, are as follows:

Balmer and Fräntzel (*Berliner Klinisch Wochenschrift*, 1882, No. 45) examined the sputa in 120 cases of phthisis and in that of all of them found bacilli. In cases of chronic bronchitis, they found none. They found the organisms most abundant in acute cases, and in those rapidly progressing.

Prof. D'Espine, of Geneva, found the bacilli in the expectoration of twenty cases, in whom the diagnosis of phthisis had previously been made. They were absent in five cases of chronic bronchitis, with emphysema. As the result of his experiments, Prof. D'Espine does not think that the number of bacilli is in proportion to the severity of the disease. He, however, is of opinion that they are always present in phthisis, and that several examinations should be made on different days, before the absence of bacilli should be considered certain.

Dr. Kowalski, in a paper read before the Medical Society of Vienna, stated that he has since May 1st, 1882, examined the sputa from 600 patients, and that he had not in a single case found the bacilli where tuberculosis was not present. He considers the presence of the bacillus to be a sure indication of phthisis, and that the number is in direct proportion to the severity of the disease.

Dr. Pfeifer, of Wiesbaden, in the *Berliner Klinisch Wochenschrift*, confirms the opinion of previous observers, viz.: that the bacillus is always present at some time or other in the sputa of tuberculosis and that they vary in number and size, in direct proportion to the severity of the disease.

In England, pathologists and physicians in practice have interested themselves very much on this subject.

Dr. West, at a meeting of the Pathological Society of London, gave the following conclusions reached after the investigation of over fifty cases:

(1) That bacilli were found in the sputa of all cases of phthisis in which there was excavation, and that they varied in number with the rate of destruction.

(2) That the arrangement in groups and masses indicated greater destruction than if the bacilli were isolated, unless the isolated bacilli were in great numbers.

(3) That he had detected no variation in size of the bacilli in different cases.

(4) That the bacilli being in his opinion evidence of destruction of the lung, they might, in some doubtful cases, be of diagnostic value, but that in most cases they were merely an additional confirmation of what was already clear from physical signs, and the same was true as regarded prognosis.

Dr. C. Theodore Williams read a paper at a meeting of the London Medical Society, February 12th, 1883. He, with his assistants, examined the sputa from 130 different cases. The results of his experiments agree with those already given with regard to the specific character of the bacilli. The fact that none were found in cases of bronchiectasis, in which the expectoration was extremely fetid and abundant, separates the tubercle bacilli from the numerous organisms connected with fermentation and decomposition. As to the bearing of these on the prognosis of the disease, he does not think there is any definite ratio between the activity of the disease, and the number of bacilli, though as a rule they are few in cases where the disease is quiescent.

Dr. Whipham gave the results of the examination of twenty cases. They corresponded with those obtained by Balmer and Fräntzel.

Dr. G. A. Heron gave the results of the examination of the sputa of sixty-two cases. They were similar to those already given.

The general opinion of members of the London Medical Society appeared to be that bacilli were always found in cases of tuberculosis and in that disease alone.