

time. The lungs were carefully examined. There was found some hypostatic congestion posteriorly, and a slight degree of emphysema, but absolutely no sign of tuberculous infiltration. The larynx, which was the seat of disease, was removed for closer examination. There was found to be marked superficial ulceration of the entire extent of both true vocal cords, and of the interarytænoid mucous membrane, also trinefaction of the arytaenoid cartilages, in fact, the characteristic picture of laryngeal phthisis. In order to be quite certain of the nature of the affection in this case, it was thought well to examine the discharge from the ulcerated surfaces with the microscope. Accordingly some of the matter was removed to a cover glass, and stained in the usual manner, when it was found to contain an abundance of tubercle bacilli, which demonstrated to a certainty the true pathological nature of the disease. This case I consider to be one of very great importance, because it proves the possibility of the larynx becoming affected in advance of the lung, and when once this point is granted, there is no reason to doubt the fact that it often so occurs. If, then, we can recognize tuberculosis at this early stage of its existence, while indeed it is restricted to the larynx, it is not unreasonable to suppose that by appropriate measures we may prevent its extension to the lung. And I believe it is possible, by examining the secretions with the microscope, to recognize tuberculosis at this stage. However, the point of greatest practical importance to us is, not so much whether the disease may be primary in the larynx, but the fact that it may often be recognized there very early in the course of a case of phthisis, before, indeed, it can be recognized by a stethoscopical examination; and this, numberless instances could be brought to prove. Now that the bacterial origin of phthisis is almost universally admitted, and also that in most cases the bacteria enter the system by means of the air which we breathe, it is not unreasonable to suppose that these germs may find a lodgement on the mucus membrane of the larynx, a slight erosion or roughness of the epithelial layer affording a suitable locality for further development. Louis advanced the theory that the larynx disease was caused by the decomposing secre-

tions of cavities in the lung being coughed up and arrested in the larynx. This theory was strongly supported, especially after the discovery of Koch's tubercle bacillus, by Klebs and others, who believed that the contents of the cavities, which are rich in bacilli, being retained on the mucous membrane, and especially in the pouches of Morgagni, produced disease by contact, either only of those parts predisposed to it through their anatomical relations, or affected the whole mucous surface with deeper changes. Against this theory, however, we have the fact that in many cases of phthisis we find extensive cavities in the lung without any laryngeal disease, and *vice versa*, advanced ulceration in the larynx before any cavities have been formed in the lung. Another argument against Kleb's theory was advanced by Heinze, who pointed out that the anatomical changes in larynx tuberculosis begin not on the surface of the mucous membrane, but in the subepithelial layer. Our present belief, however, of the mode of penetration of the bacilli into the tissue is that they enter at some existing erosion of the mucous membrane, there develop themselves further and give rise to the changes, without the epithelial covering in the meantime having been drawn into the process.

In conclusion, gentlemen, the points to which I wish to ask your attention are:—

1. That general tuberculosis may begin in the larynx.
2. That in a large percentage of cases it is present in the larynx at a very early stage, at least of pulmonary phthisis.
3. That in either of these cases we may be pretty certain at no distant date to have the lungs seriously implicated.
4. That it is often possible to diagnose a case of phthisis by the larynx affection earlier than by a physical examination of the lungs.
5. That in cases of ulceration of the larynx, it is advisable to remove the secretions in some way, as with a brush or cotton swab, and have the same examined with the microscope.
6. That the advantage we gain from the points which I have endeavored to prove, consists in the benefits of the early treatment which we are thereby enabled to afford the