

The mucous membranes—respiratory, alimentary and genito-urinary—and the serous membranes, are very commonly affected. Of the organs—tubercles are frequent in the lymphatic glands, lungs, liver and spleen.

Prof. Walley of Edinburgh says: "The insidious nature of tuberculosis, has perhaps had much to do with the comparative slowness with which professional and public opinion has been directed to it, but the strides which it has made, and the hold which it has gained upon our stock, render it one of the most important questions affecting the future wellbeing of the bovine species. Looking at an individual tubercle, we might be led to despise its comparative insignificance, and to ignore its deadly meaning; but when we see thousands upon thousands of these knots existing in the organism of a single animal, a truth is forced upon our minds which we cannot refuse to recognize—that we have to deal with an insidious, implacable, and deadly foe; and independently of its ultimate fatality, I think I may with safety say, that no morbid substance known to the pathologist is so protean as tubercle in the number of functional derangements to which it gives rise."

By common consent it seems to be conceded that Jerseys and Short-Horns are most subject to tuberculosis. Animals that are inbred, of a lymphatic temperament, attenuated figure, light barrels and narrow chests, are undoubtedly predisposed to tubercle more than those in which conformation may be said to be more perfect. The Ayrshires and Holsteins, are, as a rule, quite free from it, but under the influence of a change of climate they become particularly predisposed.

The sombre colored and more hardy breeds, such as the Herefords, Sussex, and Devons, seem to be particularly exempt from disease, and it is claimed that the polled Aberdeenshires never develop it, however closely bred. The bovine tribe, however, is pre-eminently disposed, equally so with man; and next in order is the common rabbit. Pigs are very prone to tubercle and also poultry. It is rarely seen in the sheep, cat or dog, while a tuberculous goat is one of the rarest of curiosities. In the bovine species, tubercle is remarkable for its enormous deposit in the lungs, although other parts are freely affected.

Tubercle may be confined to a non-vascular, gray, semi-transparent nodule, varying in size from

a millet seed to that of a walnut, and may occur either alone or grouped together into irregular masses, these masses consisting of groups of tubercles, forming grape-like bunches in some parts. According to Williams, tubercle is capable of higher development than the grey nodule and is prone to rapid decay, and caseation, formerly called yellow tubercle. The conversion of the grey tubercle to the yellow is the most common retrogressive process, sometimes forming masses the size of a cherry or small walnut, and softer than the grey. In the larger number of cases, these tubercles, soften and liquefy into the lungs, and in this condition, escape through the bronchial tubes which communicate with the trachea; there being left in the lung, in these cases, a cavity, excavation or vomica. These cavities vary greatly in number, and in size range from that of a pea to that of a hen's egg, and even larger in some cases, and are filled with a curd-like puriform fluid, from the process of liquefaction which the caseous mass undergoes. There is always one and there are generally several pervious bronchial tubes opening into these cavities, these tubes having the appearance of having been cut off just where they enter the cavity; occasionally, but of rare occurrence, a considerable blood-vessel, does get laid open during the formation of a vomica, and then fatal and copious hæmorrhage may ensue.

The probable reason why bronchial tubes open into these cavities and blood-vessels do not, is to be found in the anatomical difference in their structure, the blood-vessels yielding readily to pressure, are pushed aside easily, while the bronchial tubes are not so easily compressed, nor do they carry any coagulable fluid, but their open mouths remain where the tubercular matter stopped and a channel is thus formed through which the same matter, after it has liquefied finds its way towards the trachea. According to Niemeyer, the tubercular matter, when once deposited, increases in quantity, until at length it liquefies by a sort of fatty degeneration. The tubercular matter becomes soft, breaks down, and is ultimately expelled through the bronchi, trachea and mouth.

It is a remarkable fact and very important, that tubercles when they affect the lungs, are not deposited at random, but in the upper lobes. It is here also that they first ripen and grow soft and become ready for expulsion, and it is here also that we have the largest vomica. These facts have a