

preceded them.) We may from many circumstances have our suspicions aroused, that some one or more among a lot is affected, but as far as I am aware there are no sure symptoms which would enable us to come to a direct conclusion. I know at least that this is the case among the dairy stock in Edinboro'; even their constant attendants rarely remark anything unusual about them, until the disease is considerably advanced, and I have even in some instances, although happily they are rare, known one animal to be in the last stages, before anything like serious attention was paid to her case, so apt are their owners to attribute diminution of the appetite and milk to something trivial.

Amongst the very earliest of the symptoms, there is a disposition to restlessness, the cow moving from off one fore foot and resting her weight on the other alternately, and the urine diminished in quantity and much higher in color with a strong disagreeable odor; in unfavourable cases this condition of the urine remains all through the disease. If on this appearance of the urine, some of it be collected and tested by some competent person, and there be found to be an almost or total absence of the chlorides in it, we would be warranted in suspecting that some inflammatory disease of the lungs existed; our attention would at least be drawn to those organs requiring a careful examination. The urine is generally observed to be unusual like, just a few days before the animal begins to shy her food. They lose their appetite generally gradually at first; if they leave off feeding all at once, which they sometimes do, it is an unfavourable symptom, such cases generally running their course rapidly and fatally, and more especially if the same is observed of the milk. The udder at an early stage of this disease is very hot, the teats unusually so, and painful. There is a falling off of the yield of milk, but as I have said above, if it is suddenly suspended we have reason to apprehend the worst. Many cows continue to give milk all through the disease, even although they are not eating much, which is a favourable symptom, indicating a good constitution, and a tendency to an early return to health. The animal now appears dull and listless—back slightly arched and head poked out; the hind legs are brought forward beneath the abdomen. Many attach importance to the animals flinching on being pressed along the spine. This, however, is never a symptom of disease amongst dairy cows, as almost any cow in health will do so. The withers are cold; irregular heat of the extremities and ears, the former usually inclined to be cold; the eyes are unusually bright and injected; there is a knuckling of the hind fetlocks frequently observed in the earliest stages, indicating inflammation of the pericardium and pleural membranes within the chest; rumination is suspended; the forelegs are posed, with the toes inwards and elbows outwards, to assist respiration by affording increased chest room. The

respiration is short and hurried, averaging first from 30 to 40 acts per minute; pulse first hard and quick, averaging 76. Both respiration and pulse, however, quickly change the former become heavy and oppressed, and accompanied with a characteristic grunt at each expiration; this sound is also produced by pressing the cow over the intercostal space and it indicates the adhesion of the pleura to the inside of the ribs. The pulse, at first hard and quick, changes to a quick weak pulse, which change we generally have emaciation—the nostrils are expanded with a mucopurulent discharge issuing from them. Cough is generally present, but it is not always a symptom. At first it is dry and husky—latterly becoming short, hacking, and painful. The dung at first is inclined to be dry and hard, and deficient quantity; as the disease advances it also changes and we have diarrhoea present; this at an early stage of the complaint in young cows, and with other symptoms are favourable, is said to be a good symptom; but where it comes on late from the presence of fermented food in the stomach and the impoverished poisoned state of the blood, it is a very bad symptom.

These, the usual prominent and most important symptoms of pleuro-pneumonia, now gradually become more aggravated as debility increases. This is well marked in the staggering crouching gait, the extreme emaciation, occasional shivering, and weak tremulous posture. There is now in most cases gaseous distension of the first stomach, and an apparent bulging out of the thoracic walls, the belly tucked skin yellowish and adhering closely to the surface of the body is cold, she grinds teeth, and there is a discharge of saliva from the mouth. Along with a distension of stomach, we have frequent eructations of up the oesophagus. This is often present in the early stages, and is a good diagnostic symptom.

Unlike the horse, cows afflicted with this disease will lie down; but this is accounted for the difference in the anatomy of the part—broad flat sternum and a peculiarity in the lower articulation of the ribs, admitting room for lateral expansion of the chest. If one rib is affected, she will lie upon it or towards it as to free the other for respiratory purposes; if both are affected, she will either stand or lie upon the sternum, and occasionally on one side alternately. Auscultation is in this disease a valuable aid in enabling us to form a correct diagnosis, but it can only be practiced by one conversant with the healthy and unhealthy sounds of the chest, or by the scientific Veterinary—although I know many men, who by long and dearly bought experience, can at once tell an animal afflicted with this disease, from the symptoms I have given, and without at all studying the condition of the lungs.

The duration of the pleuro-pneumonia varies much in different cases, according to the