

most important bearing upon a correct diagnosis, in cases that otherwise would be doubtful, for the converse of this is true in common inflammation of the lungs. Pneumonia affects by preference the lower lobes, and there is much practical advantage in knowing these points of contrast. In health, the lungs of bovines, weighing only between six and seven pounds, are so buoyant that they float upon the water, while the lungs invaded with tubercular formations, often weigh fifty or sixty pounds, and immediately descend to the bottom when placed in water. The liver is also very apt to undergo remarkable changes. It sometimes enlarges by becoming full of adipose matter, which greases the hands and scalpel when it is cut open, the entire gland becoming soft, and loses its natural red tint, assuming a pale fawn color. Sometimes the cut surface of a liver has a whitish and glistening appearance and is then called a waxy liver.

According to Green: "Recovery of a part may occur, with loss of substance, by means of the fibroid change or by the healing of a tubercular ulcer. On the other hand, tubercular processes may directly lead to death, by generalizing, or by exhaustion from profuse and prolonged discharge, coupled with lardaceous degeneration, or indirectly by opening the way for the infective diseases of wounds—pyæmia, erysipelas, etc. Occasionally, the liquefied tubercle is evacuated, by ulceration, through the pleura, into the pleural sac, giving rise to pleuritis with effusion, and allowing the entrance of air, thus causing pneumo-hydrothorax. The adhesions resulting from the successive attacks of dry circumscribed pleuritis, which occur almost invariably, are conservative as regards protecting against this accident, which occurs in only a small proportion of cases."

Prof. Flint says: "The disease proves fatal generally by asthenia, debility, want of strength. It is rare for the deposit to be so abundant, or the destruction of lung to be so great, as to destroy life by apnoea, absence of respiration. The patient is gradually worn out by the protracted disturbance occasioned by the disease, conjoined with progressive emaciation and exhaustion. The development of pneumo-hydrothorax from perforation is apt to prove fatal in a short time, and sometimes by apnoea. Acute peritonitis from perforation has been known to occur, and this affection is likely to prove rapidly fatal."

The symptoms of tuberculosis in cattle are in the earlier stages sometimes involved in more or less obscurity. There is a general unthriftiness, a diminished and capricious appetite, the animal is easily exhausted, there is a weak hoarse cough, that is almost diagnostic; the skin is sensitive and dry and the coat staring, the mucous membranes are pale, the digestive organs are weak, the rumen prone to tympanitis, and diarrhoea sets in, which is generally excessive, the pulse is variable, the temperature increased, the eye bright and lustrous; there is a deterioration in the quantity of milk as also the quality; being blue and watery and contains a larger proportion of alkaline salts; but is less rich in nitrogenous matters and fat and sugar than in health, proving that assimilation is defective. If the animal is compelled to walk quickly, there is labored respiration, which becomes so prominent as to assume the abdominal character, if the pleura is invaded by disease. In herds predisposed to tubercle, they often become lame from some unassignable cause, when the *post-mortem* examination reveals tubercular inflammation of a joint. Pulmonary tuberculosis is characterized from the first by tumefaction of the retropharyngeal glands; the inspiratory movements are irregular; a harsh friction sound is heard on auscultation, resembling somewhat the sound produced by rubbing the thumb over a tambourine. The cough is short and not easily provoked except by sharp percussion on the thoracic parietes, a procedure which evidently causes pain to the animal.

Nymphomania, or excessive sexual desire is also frequent, but the animal is sterile; pregnant cows abort. As the malady develops, the cough becomes more persistent and easily induced and is accompanied by muco-purulent expectoration and the animals become more apathetic and sluggish in their movements; emaciation proceeds more or less rapidly, extreme debility ensues, the eyes are sunken and brilliant, the mouth is open and drawn back at the angles, the spine is arched and tender, and the breath as death approaches becomes cadaverous and fetid.

Percussion gives dullness in some parts of the chest, and in others the normal resonance.

Auscultation reveals an altered respiratory murmur; it is louder in some places than in others, and of a harsh and rushing sound. Instead of the normal vesicular murmur, we find the dry crackle,