

Correspondence.

REMARKS ON THE RUSSIAN CATTLE-PLAGUE, AS EXHIBITED BY COWS IN THE LONDON COW-SHEDS.

LETTER FROM F. J. BURGE, Esq.

SIR.—I have had abundant opportunity of seeing cattle affected with the prevalent "plague"; and I have made many *post mortem* examinations.

I believe that the disease is essentially a catarrhal or mucous fever, but, *not exclusively an intestinal one*; that a blood-poisoning is coincident with, or *precedes more probably*, the local manifestations of the disease, and that this blood-poisoning makes its *first* impression on the sensorium, as indicated by the peculiar position of the head of the animal; if closely watched before the mucous symptoms show themselves; that this primary cerebral influence may be first exercised on the function of digestion, causing loss of appetite, etc., but that its influence is soon extended to the other mucous membranes as well as to that of the stomach. The surfaces of the eye, mouth, and nostrils, become pinkish-white, and covered with excessive and unnatural secretions; the expression listless and stupid; in fact, the cerebral complication is manifest, for the animal will, in the first stages of the disease, blunder even against a stone wall, as if unconscious of its presence. The vital powers seemed stunned; the prostration and debility being marked from the first onset of the morbid influence. The mucous membrane of the mouth, fauces, and stomach, I think, are affected pathologically, subsequently to that of the eye; and, lastly, that of the intestinal canal proper. The morbid influence then attacks the urinary organs. The vagina of the cow shows similar appearances to those of the eye. It is of a pale pink, studded, like that organ, with reddish patches, but not ulcerated; the diffused redness appearing rather in the submucous tissues, as if from infiltration.

The mucous membrane of the mouth is somewhat similar in appearance, modified, of course, by its coarser structure here. Underneath the lips are found the same peculiarities as in the eye and vagina, though much more marked, and the mucous follicles very prominent. The fauces, in some instances, are intensely reddened; though, in others, I have found them pale and pinkish.

The general condition of the skin is undisputed, hot and feverish in some stages, cold and unnaturally bloodless in others. The staring of the coat is universal. The moaning grunt, which is so constantly heard, is special and peculiar. Unlike that of pleuropneumonia, the result of defective respiration, the symptom here is more prolonged, and carries with it an expression of pain and suffering. If the attack be severe, and particularly just before death, the animal, if there be a rail to rest its mouth

against, will, during the expiratory grunt, assume the position of the horse in crib-biting.

The appetite at last entirely fails; the debility and prostration become excessive; diarrhoea prevails. The animal, in an effort to lie down, drops suddenly on the ground; and, in endeavouring to rise, will stick its horns firmly in the manger or against the partition of the stall to assist in doing so. Twitchings of the muscles precede death. I have only seen the emphysematous condition of the cellular tissue of the neck and shoulders marked in two or three instances.

The evidences on dissection are not dissimilar, as far as the patent mucous surfaces are concerned, from those discoverable during life. The back parts of the tongue and fauces are variously red or pink, and always covered with slimy mucus. The trachea and bronchial tubes are filled with froth; and the lining membrane is covered with a thick plastic yellow lymph in flakes, but with no apparent ulceration. The substance of the lungs is generally healthy, though in some instances highly emphysematous.

The lining membrane of the various stomachs shows more or less evidences of implication in the disease; but, in the fourth stomach, these become more decisive, and gradually increase in intensity to the termination of the small intestines. On opening these throughout their length, the mucous surface is found covered with a thick slimy secretion; and, on passing the opened bowel between the thumb and finger, a thick ridge of it will be collected, of the size of the former, in a distance of a few inches along the gut. On examination of the softened mucous membrane itself, I have found no ulceration; but, in almost all the instances I have seen, there have been unnatural, *highly congested*, thick, corrugated longitudinal folds of mucous membrane traversing the whole length of the small intestines. Peyer's patches have been usually less visible than natural. Sometimes I have observed, apparently, an enlarged glandular body containing opaque matter with a black spot in the centre, and of tubercular form; but this appearance I believe to be due merely to a chronic enlargement of a solitary gland. The abnormal conditions diminish or cease in the large bowels. The liver, spleen, and kidneys have generally been healthy, though the uriniferous tubes show that they are involved in the mucous malady.

I have not examined the brain and spinal marrow, but am disposed to think that a kind of cerebro-spinal meningitis coexists.

The blood is fluid; and the flesh is of a peculiarly dark colour after death.

I am, etc., F. J. BURGE.

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Hammersmith, August 1865.

ACCIDENTS IN COAL MINES. The reports for 1864 show that 867 lives were lost in the year by accidents—that is to say, one in every 354 men employed, one to every 109,715 tons of coal raised. Large as the loss of life still is, the return is satisfactory by comparison.