

there are other affections of an obscure character, sometimes occurring amongst cattle, in which malnutrition is the only prominent symptom; occasional coughing of a by no means violent character, is a pretty sure indication, particularly if the breathing is more frequent than natural, but increased frequency of respiration, in connection with chronic cough, is oftenest seen in acute cases of consumption, or those which hasten to a fatal termination, or in the last stages of lingering cases, and when the deposit is in the lungs or their coverings, the pleura, which is the commonest seat.

It has been remarked that the tubercular deposits are found in a great variety of situations, but the chest cavity is the one preferred. As can be readily imagined, the seat of the tubercular growths has a great influence upon the nature of the symptoms, and when any particular organ or system of organs is particularly involved in the disease, the symptoms partake largely of the nature of those which characterize derangement of the respective organ. But, as not infrequently happens, different systems of organs are involved in the same subject, which leads to a great complication of symptoms and corresponding difficulty in making a diagnosis.

In addition to chest deposit, abdominal is most common, and the thin membrane (Peritonæum) which lines the abdomen, and forms an outer covering for most of the organs contained in that cavity, is a very common seat. As some very important operations, connected with the restoration of the blood, go on in portions of the peritonæum; when these are interfered with, from the presence of tubercle, the victim loses flesh rapidly, even although the appetite keeps good, which is a rare occurrence in consumption, for it is usually fitful in a pronounced case. In this form of the malady profuse diarrhoea often sets in, and soon carries off the subject.

The coats of the bowels are sometimes the seat of tubercle, when costiveness and looseness alternate, generally terminating in dysentery.

I have seen cases in which the most prominent symptom was bloating of an obstinate character, and, although means of dispelling the gas was resorted to constantly, still flatulence would recur. On *post mortem* of such cases, the walls of the stomach and their immediate surroundings are usually found involved in deposit of tuberculous matter.

Consumptive cows that are milking do not show, in many cases, reduced secretion, but the quality becomes deteriorated, the milk having a blue and watery appearance.

In order to get much aid from the use of a thermometer, with the object of determining whether there is any fever present or not, the instrument should be used several times at different periods of the day, and if the temperature shows an inclination to remain a degree or two over 101 (Fah.), associated with unthriftiness and a capricious appetite, it is an additional link in the chain of evidence indicating "Tuberculosis." A dirty, scurfy skin, dry coat, slow shedding of the latter, and failing flesh, make up the unthrifty state often seen in connection with this disease.

Extensive deposits in the chest can sometimes be determined by listening to the sounds emitted over the surface of that cavity. Over a deposit there will be suppression of the normal sounds, while over an uninvolved part they may be noticed to be unnaturally audible, owing to more work being thrown upon the unaffected lung tissue. It must be confessed, however, that even an experienced practitioner has sometimes a difficulty in making a correct reading of the

condition of the lungs and their coverings. The human practitioner has a much larger chest surface in proportion; the surroundings of the human chest are less bulky, and the intelligent patient can breathe in conformity with the requirements of the examiner.

The genital organs of the cow are sometimes the seat of deposit, which gives rise to more or less sexual irritability, causing pregnant animals to perhaps abort their young, or if not in calf, to show a constant desire for the male, but do not conceive.

The nervous centres are not infrequently involved, but more commonly the coverings of the centres are the seat of the deposit, than the nervous matter itself, and the pressure resulting from it impairs the function of nervous supply. Hence, the development of paralytic symptoms, as shown by irregular and imperfect ability to regulate the movements of the limbs.

Young calves occasionally manifest this form of the disorder, and usually are unable to move straight ahead, their efforts at movement resulting in their describing a circle, indicating that one side of the brain is particularly involved. If both sides are affected, there is knuckling over at the fetlocks, difficulty in getting up, and in movement. As the tubercular deposits grow, the symptoms of paralysis become progressively worse.

Perhaps the most palpable sign of tubercular consumption we have in cattle is the deposits, that take place externally, in some cases in the abdominal muscles about the root of the tail, but most frequently in the loose tissue around the throat. Of course, it would be possible to confuse them with an ordinary fibrous tumour, or abscess with thick walls, but on opening them the uncertainty is readily dispelled, if cheesy or gritty matter is found, these being the usual contents of tubercular growths that have been present for a length of time. If the wound made in opening the enlargement is disinclined to heal, this is additional evidence of its tubercular character.

(To be continued.)

### What Caused the Death of the Cow?

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I would like very much to get a little information regarding the death of a valuable cow belonging to one of my neighbors, and the treatment she should have got. The cow had never been stabled all fall, and for about a week previous to being taken sick she had been out in some cold, heavy rains. The first symptoms were violent trembling, loss of milk, and scours; the manure was almost the color of clay, with an offensive smell. She refused all food, but would drink freely; the scours became worse till the fourth day. She passed little after that. She was six days sick. I saw her on the second day. The horns, ears, nose and legs were quite cold. The hide was light, and the back a little sore. A half pound of salts, a strong dose of ginger and some saltpetre were given her. I did not see her again till the fourth day; but on the third day I believe she had been given laudanum, castor oil, and raspberry root tea for the scours. I recommended a long course of hot blankets, and that she be made to inhale the steam from scalded bran, with strong stimulants, such as hot beer, ginger and gruel. The hot blankets were applied for a while, but were not kept hot enough; then they were allowed to get cold. She never got any beer, but a pint of rye whiskey, which, together with the hot blankets raised the temperature considerably, but this was not followed up. It is the general belief that she got some poisonous substance; but it is my belief that it was from cold or chill. She kept getting colder in all her extremities to the last, and died without much pain.

FLEMING ROBINSON

Rydal Bank, Algoma, Ont.

ANSWER BY F. C. GRENSIDE, V. S., GUELPH.

The cold rains had evidently driven the blood from the surface of her body inwards, producing congestion of the bowels. There may have been some intestinal

irritation, perhaps the effect of the dryness, and indigestibility of the grass, which caused the increased determination of blood to the bowels. Nature frequently overcomes such attacks by setting up spontaneous diarrhoea, thus relieving the congestion; but if this does not give relief, inflammation results, which is very likely to terminate fatally.

It is very important at the outset to keep a subject very dry and warm. Plenty of blankets are necessary. The diarrhoea should not be abruptly checked. Fifteen drop doses of Fleming's tincture of aconite given every two hours until five or six doses have been given, will often succeed in controlling the altered circulation.

If the discharge does not then abate, and especially if pain is manifested, two-ounce doses of laudanum should be given a cow every two hours and a half; the addition to which of half-ounce doses of tincture of catechu will be advisable. If blood is passed with the feces, two drachm doses of sulphate of copper may be substituted for the catechu.

It is not wise to allow very much water, and what is given should have some wheat flower mixed with it. Mustard should be freely applied, and diligently rubbed in all over the abdomen. In applying it to the skin of cattle its irritant action is much increased by adding two or three tablespoonfuls of oil of turpentine to the mustard and water.

### The Farm.

PLEASE examine your address tag. If it reads Dec. '87, your subscription expired with that issue, and we will be obliged if our readers will renew at once.

Agents wanted in every locality in Canada to canvass for the "Canadian Live-Stock and Farm Journal." Good salary to good men. Sample copies free. Write for particulars, giving former employment, to the Stock Journal Co., Hamilton, Ont.

ONE Thos. E. Hill, Chicago, in a circular sent to the press for publication, assigns the great amount of drainage done upon the lands of the United States as the cause of drouth and cyclones of frequent occurrence in that country. He does not condemn drainage with a view to further tillage, but recommends that the waters, instead of being allowed to flow down our streams and rivers, should be collected in ponds and small lakes. He would have those lakes and ponds stocked with fish, and so cared for as to render them objects of beauty and utility. The idea is a novel one, and is worth considering. But we are not sure if Mr. Hill is correct in the reasons he assigns as the cause of the drouth. Is it not true that the Indians of other years had seasons very dry, when river, stream, lake and marsh were just as nature formed them. Amid the russet forests the campfire had to be carefully guarded lest the former should become one winding-sheet of flame. It is also true that during recent years we have had summers of exceeding wetness, preceded by years of exceeding drouth, although during the former period there was more of forest and less of drainage. We require to move with much of caution when treading in the realm of the unknown. There can be no doubt, however, that opening up a country renders it drier on the whole, through the freer action of sun and wind. The unarrested winds catch up anything of moisture that they come in contact with, and this is a powerful argument in favor of partial re-forestation. Whatever is done with the waters, let draining be continued until every foot of arable land requiring it is completely drained.