Large Animal Clinic Quiz

Gavin Meerdink and Tim Lucas*

Answers on page 121.

1. An excited sheep owner shows you one purebred that died during the night and two more sheep that appear near their final throes. The less affected of the two is able to stand but is weak and ataxic; at present the animal has no temperature and is near the water trough breathing rapidly and grinding his teeth. The other one, the owner finally admits, has been sick about 2 days. He is comatose and reportedly has had "fits." The most readily observable sign is a pronounced icterus seen in the mucous membranes and the non-wooled areas. The floor of the pen indicates a diarrhea and the feed pans are still full. Besides a severe icterus throughout the tissues you find upon necropsy of the dead sheep some dark serosanguinous fluid in the thoracic and abdominal cavities; the spleen seems enlarged and very dark and there are subepicardial hemorrhages. The kidneys are very dark and mottled (so-called "gun-metal" appearance) and some dark brown droplets are found in its pelvis.

You notice the flock is on a confined feeding system and they appear quite healthy, well-doing, and ready for market. Your client is a conscientious manager who follows routine worming and vaccination programs and is strict with his sanitation practices. These sheep are on the same recommended ration that has been successful for a number of years.

What is your diagnosis and how did the problem arise?

2. A Holstein dairyman calls you to examine a three-month old calf which has developed a mysterious lameness in her rear legs. When you arrive the animal is lying down so you palpate and flex them but note no irregularities. However, upon lifting the calf to her feet, her hind legs overextend and she can walk only with short stilted steps. A hind limb, however, can still be normally flexed when manually picked up. You readily notice that the calf continually has her tail lifted as if she were ready to urinate. There appears to be some muscle atrophy over the gluteal region. Otherwise the animal is somewhat emaciated even though she will eat and suckle when aided by the owner.

The owner reports that to his knowledge the calf was never injured but instead the syndrome seemed to develop gradually, starting about 2-3 weeks after birth. He also mentions to you that last year he had another calf with the same type of "lameness," but he didn't do anything about the animal and it finally wasted away and died. When asking about his breeding practices, he states that he uses AI for some of his cows but has for the last few years used a bull which he raised for the rest of the herd.

What is your diagnosis?

3. Two-hundred pigs weighing 25 pounds were weaned one week ago. They were put on a full feed of corn, oats, balancer and mineral supplement. Twenty-four hours ago the farmer noticed the first clinical signs. Since then there has been a 20% morbidity with 100% mortality of those affected. Clinical signs noted were wandering and running into objects. The pigs then went into recumbency and paddled their legs. Ten minutes later they were dead. No temperature. The appetite was reduced.

Postmortem revealed petechiae on the kidneys.

Management indicated poor sleeping conditions and the waterers were three-fourths full of mud and ground feed.

What is your diagnosis?

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Answers To Large Animal Clinical Quiz

1. Several cases of this same type of copper poisoning have been diagnosed in Iowa. Often it is due to the overingestion of CuSO₄ or field treatment products containing CuSO₄. However, cases have occurred in confined feeding operations in which the copper levels were fed as currently recommended but the molybdenum and sulfate levels were deficient. Molybdenum inhibits the uptake from the gut and storage of copper in the liver so that its deficiency allows an accumulation of copper in the liver making the animal susceptible to toxicity. For a more complete explanation and discussion of this syndrome and its pre­
2. Bovine Spastic Paresis or Inherited Spastic Paresis of Cattle
3. Salt Poisoning

With the waterers full of mud, the pigs were deprived of fresh drinking water and even though the feed had a normal level of salt, it was enough to incite a clinical case of salt poisoning. These waterers were cleaned out and other sources of water were provided. There were no further cases and those showing signs of the wandering stage recovered.

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