

Bovine Practice

As seen by a midwestern veterinarian

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THIS article is not intended to be complete regarding the subjects discussed. It is hoped that some of the information contained may be of value to a practitioner, particularly one just entering the field.

Parturient paresis is known to be an acute hypocalcemia and other factors must be concerned with the syndrome. Parturient acetonemia must be considered as a complicating factor. Cows on what seem to be ideal rations succumb to it as well as cows on poorer rations. Some have elevated temperatures and others may be subnormal. The stage and duration of the disease determine the temperature. I have seen it occur several weeks before and three days following parturition. A number of atypical cases have convinced me that with these a gloomy prognosis is the best. If the animal responds to treatment as most of them do then no harm is done. If the animal should die at time of injection or if she should fail to respond to treatment and never regain her feet, then the owner has been prepared.

Example

One case recovered promptly and walked home from the pasture. Later she suffered a relapse and died. The owner did not realize that I might have done more for the cow. Since that time I have made many return trips in such cases. Additional injections of calcium solutions are desirable in many cases. Solutions containing phosphorus and magnesium in addition are superior in certain cases.

These latter solutions I believe are more dangerous and can cause severe tissue reaction if permitted to leak between the vein and surrounding tissue. However, in many cases they produce quicker response. In most cases I administer a solution containing calcium, phosphorus, and magnesium with dextrose. Dextrose is particularly indicated when acetonemia is present. This is differentiated by a positive test for ketone bodies in the urine.

Calcium Chloride

Several cows unable to rise after administration of quantities of calcium gluconate have responded promptly to calcium chloride. A large Holstein cow with parturient paresis received 1000 cc. of 23 per cent calcium gluconate at 5:00 p.m. and failed to respond. At 9:00 p.m. she received 1500 cc. of the same and responded by standing, eating hay and appearing quite normal. In the morning she was again unable to arise and required an additional 1000 cc. She remained on her feet and since has produced four normal calves with no further trouble.

Last winter a grade Guernsey presented a problem and until the other day I supposed her to be dead. Over a period of three days she received, intravenously, solutions of calcium gluconate, phosphorus, magnesium, calcium chloride, her udder was inflated and she received vitamin A orally in addition to stimulants. The cow responded to all treatments but failed to regain her feet and in a few hours after treatment would again return to a comatose condition. I gave her up as I did not

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believe it justifiable to make more trips and the road was getting impassable. The owner was instructed to continue to inflate the udder twice daily. The cow was able to rise in a few more days and is now doing well.

Most cases of parturient paresis will recover promptly but sooner or later the practitioner will find one as described above and in most instances they will respond if treatment is continued. How much of these solutions can be given to an individual I do not know, but I believe very large quantities can be administered if they are given slowly and the animal is watched for any alarming symptoms.

Constipation

Constipation is a term which covers a variety of ills and is the diagnosis usually given by an owner when he calls. In most cases the owner is wrong. You may find mastitis, acetoneuria, parturient paresis, pyelonephritis, pneumonia, atony of the rumen, stasis of the intestines or other conditions. In most cases an examination of the urine should be made. Ketone bodies may be found even though the cause of the illness may be any of these conditions. Even so the administration of dextrose is helpful. The administration of dextrose intravenously and the oral administration of molasses constitutes my routine treatment for acetoneuria. I am not sure that vitamin A has been greatly beneficial in the cases I have treated.

Pyelonephritis

Many cases of pyelonephritis respond to treatment with sulfathiazole and if they do I recommend selling the animals to the market for salvage. Many cases of pyelonephritis may be overlooked if the urine is not routinely examined. Atony of the rumen leads to a decrease in amount of feces passed and if the cow is confined this is one of the first symptoms noted by the owner. Many of them give one or two pounds of Epsom salts with varied success. My own experience makes me believe this is a poor practice as the owner's diagnosis is often faulty. After making a diagnosis of atony of the rumen my treatment usually consists of $\frac{1}{2}$ lb. artificial carlsbad

salts, 1 oz. ginger, 1 oz. gentian, 1 dram tartar emetic, and 2 drams fluid extract nux vomica given with several gallons of warm water with a stomach tube. One ounce of sodium thiosulfate may be added. Tablets of nux vomica, tartar emetic, ginger, and gentian are convenient to use and lend themselves to being left with owners for follow up treatment. In addition I usually use from 4 to 8 cc. of lentin. If the response is slow calcium gluconate solution is of value.

Winter Diarrhea

Winter diarrhea may not be properly named; however, in the fall and winter a severe diarrhea frequently appears in individuals and may progress through an entire herd. It has been confined to dairy cattle in my practice and usually occurs soon after they are started on ensilage. In other affected herds no ensilage is fed but usually in these herds corn shreds or corn fodder is fed. Frequently the feces contain blood and the animals rapidly lose flesh, appetite, and their milk flow diminishes. If nothing is done there will be severe loss of weight, and the cattle may not regain production all winter. Treatment consists of decreasing the amount of silage fed to well animals and stopping it entirely for affected animals. Astringents should be given liberally to the cows. One effective combination is catechu, copper sulfate, iron sulfate and chalk, 15 grains of each made into capsules. Give four capsules every three hours, decreasing the dose as the animals improve.

Impactions

In late summer cattle often break into cornfields. A combination of factors are responsible; poor fences, poor pastures, lack of supplemental feeds, and often just pure carelessness. The owner may call in a few hours and the cows usually look well at that time although they will be very full and tight. At this time I usually administer one to two ounces of sodium thiosulphate in water with the stomach tube and keep cattle confined with access to only a limited quantity of water. Most of them will recover with this treatment. It may be supplemented with stimulants

as suggested for atony of the rumen but I would not recommend lentin until the abdomen has lost its tenseness (about 24 hours).

Most owners wait about twenty-four hours and call when one or more cows are down, unable to rise, or staggering. This calls for drastic action. Some cows make remarkable recoveries on administration of calcium gluconate, the majority of them do not. A rumenotomy followed by stimulants and dextrose or calcium gluconate intravenously has been the most satisfactory treatment for me. A considerable number of cows have recovered following rumenotomy that I believe would have died with other treatment. Some of these animals will be so sick that anesthesia is not necessary and in others paralumbar anesthesia is the one of choice.

Uterine Torsion

Every year I have encountered more cases of uterine torsion. This is either due to circumstances or because I have become more alert at recognizing the condition. A complete or nearly complete torsion can not be missed if an examination is made. I made one call to see a "constipated" cow and found a torsion instead. On another call I found a cow that had received a package of salts and other remedies daily for at least four days and she was suffering from this condition. Partial torsions are easily missed, especially if extremities of the foetus have entered the vagina or are protruding. These cases usually are observed only if the extremities are replaced and the vagina carefully examined for the telltale folds. If present the direction of the rotation should be noted. This is usually not difficult to correct and might correct itself as traction is applied. It is much safer, more scientific, and easier to correct it first. This may be done by the method suggested in Benesch's *Veterinary Obstetrics*, using a torsion fork or by applying some traction to the extremities, lashing the limbs together and rotating in the proper direction with a suitable lever. If the torsion is quite complete this procedure may be impossible and it may even be

impossible to enter the uterus by hand. In these cases elevating the hind quarters of the cow with block and tackle and ropes about the legs above the hocks may convert the case into an easy one. A laparotomy is suggested by many and will be the method I will employ on the next case of complete torsion encountered. If you are called out in the night after a hard day's work, or the barn is dark and poorly lighted, or you wish help of a colleague, or for some equally valid reason do not hesitate to put the case off till morning and then return to finish. In the morning the torsion may have partly corrected itself, transforming the case into a much easier one. Several years ago I encountered a case of torsion almost complete and returned to my office and secured the aid of a classmate. We returned to the farm and found only a partial torsion.

Retained Placenta

Retained placenta is one of the most common conditions a veterinarian is called upon to treat. I agree with those that recommend a delay in treating of forty-eight hours. In some instances seventy-two hours may be preferable. If the cow is off feed or shows any other indications of illness she should be examined and treated earlier but most cows do not show these symptoms. The operator must exercise judgment in his manipulations and this knowledge comes with experience. In gaining experience the individual should do too little rather than too much manipulating and make a return trip if necessary. Activated charcoal, sodium perborate, and sulfanilamide are among the drugs desirable to introduce into the uterus at this time. Diethylstilbestrol also is an aid. The owner may need some education regarding this method of treatment because he wants to see the placenta removed. If you correct his mistake and explain that he really wanted his cow treated in the way you believe best and that you are doing just that he will accept your method and be satisfied.

Keeping the client satisfied is almost as important as treating the animal correctly.