POST-OP TREATMENT:

The cow was given 2.5 gm. Tetracycline mixed with 500 ml. of 5% Dextrose, I.V. B.I.D., and B-complex as well as Banamine I.M. for the first three days. Then she was given 5 gm. Tetracycline in 5% Dextrose I.V. S.I.D. for the fourth and fifth day.

PROGRESS NOTES:

On the first day after surgery, the cow was up but wouldn't eat. She had also a drastic drop in milk production to 3-4 lbs. The second day she ate some hay. On the third day she was sent home. On the sixth day she started to eat a little grain along with her prairie hay.

She was kept on 25-30 ml. Combiotic, 10-15 ml. B-complex and 5 ml. Dipyrone S.I.D. for five days after returning home.

By November 30, 1982, the cow was feeling normal, eating hay and grain, and her milk production was gradually increasing.

DISCUSSION:

Cecal dilatations and torsions occur sporadically in well-fed dairy cattle, and usually within a few weeks postpartum. The main cause is still not clear, but it is thought to be related to a dietary change to a highly fermentable green feed or grain, especially corn. These dietary carbohydrates may not be completely fermented in the rumen, but are in the cecum, resulting in an increase in volatile fatty acids. The increase in concentration of undissociated volatile fatty acids, especially butyric acid, in the ingesta of the cecum will result in cecal atony.

Generally, cecal torsions are supposed to develop more slowly than an abomasal torsion. However, this case illustrates how acutely they can occur. This cow was fine the day before, but in a matter of twelve hours went from normal to severe abdominal pain and distension. The fact that her udder was full when she showed severe signs, also indicates acuteness.

No clinical laboratory workup was done on this particular cow. However, values concerning a cecal torsion could show a hemoconcentration, compensated hypochloremia (Cl 90 mEq. /1.), hypokalemia (K 4 mEq./1.), and a metabolic alkalosis: (HCO 30 mEq./1.). Ketone bodies of moderate concentration may also be found in the milk and urine on occasion.[1]

A mild case of a cecal dilatation could be treated by: withholding feed for a few days and giving saline purgatives; manual reduction per rectum; or even trocarizing the cecum in more severe cases. But, the most successful method is surgical correction, via the right paralumbar fossa with manual reduction. This needs to be done early in the course of the disease, or else ischemic necrosis and gangrene may set in. If this becomes the case, then this tissue must be amputated and the prognosis goes from good to poor.

Overall, the veterinarian needs to be aware of the clinical signs of a cecal torsion and work closely with the dairy man to check rations and on recognizing problems early.

REFERENCE

1. Anderson, N. V.: *Veterinary Gastroenterology*, Lea and Febiger, Philadelphia, 1980, p 538.

Gastroenterology Case

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On December 3, 1982 a 500 pound Angus steer was presented at the Blue Valley Veterinary Clinic, Beatrice, Nebraska. The owners presenting complaint was that the animal was unable to keep down water and feed.

HISTORY:

The owner had noticed a week previously, when checking his pastures, that the steer in question was not putting on weight like the other calves. He brought the steer into his farm corral to pen it separately from the others. When the calf ate or drank water it was noticed that the material ingested would drop from his mouth. No bloat was ever noted. The owner mentioned that the pasture where the steer had been running contained a considerable number of hedge trees and that most of the hedge apples in the pasture were gone, apparently having been eaten by the calves. Also, the pasture contained a large number of Russian thistles which the owner had sprayed with 2,4-D. The owner said that after spraying, the thistles became palatable to the calves, as on several occasions he saw calves feeding on them.

PHYSICAL EXAMINATION:

On admission, a physical exam was performed on the steer. Pulse and respiratory rates were normal. The body temperature was 102°F. The mucous membranes appeared normal with a slight to moderate degree of dehydration. Auscultation of the lung fields revealed some harsh rales.

A stomach tube was passed into the rumen. No gas or fluid was obtained. With the stomach tube in place a gallon of Carmilax and NRG (an electrolyte and nutrient mixture) was pumped into the rumen. After the tube was withdrawn, regurgitation of the mixture was observed. Ground corn and water were placed in front of the steer. Soon after the steer ate and drank, ingesta was observed running from its mouth.

The next day, a stomach tube was again passed and a Carmilax-NRG mixture was administered. Again no regurgitation was observed. The floor of the steer's stall was soaked with saliva and water, presumably from frequent attempts by the calf to drink water and subsequent passage of the water back from the mouth. Since aspiration pneumonia was a concern, the steer was placed on daily oxytetracycline intravenously at 5 mg/lb.

Over the next two days, there was no improvement in the steer's condition. On both these days, the calf had a low-grade fever of around 103.5°F. Supportive care with oral feeding of NRG was continued, along with antibiotic therapy.

On the third day, the patient's condition had deteriorated markedly. The steer was anorectic and recumbent. The mucous membrances were muddy appearing and dyspnea was apparent. Attempts to administer nutrients via stomach tube met with limited success. Later that night the steer became comatosed and died the next day.

NECROPSY FINDINGS:

The lungs were bilaterally hemorrhagic and suppurative pneumonic lesions were present in the ventral portions. The rumen and remainder of the GI tract contained some ingesta. Upon examination. the caudal 10 inches of the esophagus were found to be markedly dilated. At the caudal end of the dilated portion a large focal ulcer was present in the ventral portion of the esophageal mucosa. The ulcer measured approximately 5 inches by 3 inches and was nonpenetrating. It was located just cranial to the cardia. The affected portion of esophagus was taken for histopathologic examination.

DISCUSSION:

As for possible etiologies of the case, it seems likely that a foreign object at some time previously had traumatized the distal region of the esophagus, producing an area of ulceration and necrosis.

The hedgeballs in the pasture are a prime consideration, but if one of these had lodged near the cardia it would seem that a circumscribed focus of ulceration fully circling the esophageal mucosa would have ensued. Localized trauma from ingestion of a wad of Russian thistles might also be considered.

As for the flaccid region of the esophagus, evidently innervation to this area had been interrupted, possibly due to destruction of the nerve plexuses in the esophageal wall. It is difficult to explain why bloat did not develop if a hedgeball had been lodged in the esophagus. If esophageal choke, as from hedgeballs, did cause the ulcer, the choke was short-lived with the obstruction being spontaneously relieved.

An Open Invitation to Veterinary Medical Students

Veterinary medical students are welcome to attend the 16th Annual AABP Convention in Oklahoma City, November 28-December 1, 1983. There will be no registration fee but all students will need to register. The Student Chapter, AABP at Oklahoma State University will serve as the host for all students. A special place will be arranged where students can meet with bovine practitioners to discuss employment opportunities. The Chapter will also host an evening of entertainment on Wednesday, November 30. Information about inexpensive hotel/motel accommodation will be provided to AABP student chapters.

The Class of 1983 College of Veterinary Medicine Mississippi State University who attended the Nashville meeting last year.