Rumen Engorgement in Three Bovine

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Adhesions involving segments of the intestine are a common cause of obstruction of the small intestine of humans, but are relatively rare in cattle. When incarceration of the intestine does occur in cattle from this cause, the symptoms are frequently evident within two weeks following the inflammatory reaction. Certainly this cow's progress must be followed for several months before complete evaluation of the apparent recovery can be made.

Robert Glock, '61

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Rumen Engorgement in Three Bovine. On Feb. 26, 1959, two Angus cows and a bull were presented at Stange Memorial Clinic with a history of overeating cracked corn. Physical examination revealed that a very loose, foul-smelling diarrhea was present with the hind parts of the cattle being red. The temperatures were normal. Severe tympanites was present. The affected animals constantly shifted their weight, especially on the hind feet, denoting inflammatory changes in the sensitive laminae from absorbed toxins. On auscultation of the heart, one could readily note the characteristic “watch tick” sound of the toxic heart in which the first heart sound is decreased in amplitude and more nearly resembles the second sound.

A stomach tube was passed with the aid of a Frick tube resulting in release of a foul-smelling gas. The area over the left paralumbar fossa was clipped, shaved and antiseptic was applied. Local infiltration with 4 percent procaine was used to anesthetize the area. An incision ten inches long was made through the skin, muscle, and peritoneum. The rumen was sutured to the skin with nylon suture material thus allowing blood, peritoneal fluid and fibrin to form a seal and prevent peritoneal contamination. The rumen was incised and a great deal more foul-smelling gas was released. A rumen ring shroud was introduced. It was noted that the rumen mucosa was very hyperemic. A large quantity of solid material, consisting mostly of cracked corn was removed by hand. A Kingman tube, filled with water to create suction, was introduced into the rumen and a large volume of fluid was removed. Water at body temperature was introduced into the rumen. This was removed and the process repeated several times to remove as much of the toxic material as possible. The rumen was left partially filled with fluid and was closed with two rows of continuous infolding sutures using #3 chronic catgut. The rumen was very difficult to suture because it was extremely thin and friable. The peritoneum and muscular layers were closed with interrupted catgut sutures and the skin was closed with a blanket stitch using nylon suture material.

Postoperative treatment consisted of 1000 cc. of 50 percent dextrose intravenously and 25 mg. of decadron phosphate intramuscularly. The patients ate some hay and drank water the next day. On February 28, one cow and the bull died and were taken to the postmortem laboratory. The other cow aborted on March 4. The cow was estimated to be about six months pregnant. This cow seemed to be doing well until she lost her calf. The placenta was removed on March 6 and three Furea boluses (Eaton) were placed in the uterus. During subsequent days, the cow was treated with dextrose intravenously and a penicillin-streptomycin combination intramuscularly. The animal was raised to a standing position with the aid of a hip bone sling. This cow died on March 12. The liver and kidneys were found to contain septic infarcts, there were fatty changes in the liver, and a suppurative metritis was present.

It was felt that the poor response to treatment in this case was due to the length of time that elapsed between the time the cattle overindulged and the time they were presented for treatment. Evidence of the length of delay was exhibited by the presence of laminitis and a toxic heart.

Early treatment cannot be overemphasized.

Keith Cogley, '60