

1945

Gangrenous Mastitis

Jack M. Nelson
Iowa State College

Follow this and additional works at: http://lib.dr.iastate.edu/iowastate_veterinarian

 Part of the [Large or Food Animal and Equine Medicine Commons](#), and the [Veterinary Pathology and Pathobiology Commons](#)

Recommended Citation

Nelson, Jack M. (1945) "Gangrenous Mastitis," *Iowa State University Veterinarian*: Vol. 8 : Iss. 1 , Article 14.
Available at: http://lib.dr.iastate.edu/iowastate_veterinarian/vol8/iss1/14

This Article is brought to you for free and open access by the Student Publications at Iowa State University Digital Repository. It has been accepted for inclusion in Iowa State University Veterinarian by an authorized editor of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

nemia or parturient paresis generally causes little difficulty. However, this case demonstrates that the laboratory test for acetone bodies, symptomatology, and the administration of calcium gluconate was necessary for the correct diagnosis.

—Frank K. Ramsey, '46

4

Gangrenous Mastitis. A five-year-old Guernsey cow was presented at the Stange Memorial Clinic with an extensive gangrene of the udder.

The left front quarter was swollen, cold, hard to the touch and presented a bluish discoloration. The left rear and right front quarters were acutely swollen, and there



View showing extent of gangrenous area upon presentation of the case.

was a more moderate swelling of the right rear quarter.

The owner reported that there was blood in the milk three days previous and that the swelling had rapidly spread to all four quarters. It was apparent that the milking ability of the cow had been permanently impaired, so an attempt was made to save her life.

Bacteriological Examination

Milk samples were collected aseptically from each quarter and bacteriologic examination revealed all quarters, but the left front quarter, to be free of infection. The left front quarter was infected with *Staph. aureus* and *Clostridium welchii*

organisms. It was apparent by the time these organisms had been definitely identified that the infection had spread from the left front quarter to the surrounding tissue. The left front teat was



Post-operative view after sloughing occurred and healing has commenced.

amputated to provide drainage for the spreading gangrene of the left front quarter.

Surgery

The following day the cow was restrained on the table, and an area over each inguinal region was prepared for surgery by shaving and painting the area with tincture of iodine. A three inch incision was then made over the inguinal canal and the inguinal artery was located by palpation and it was then ligated with heavy silk suture material.

The inguinal artery on the opposite side was ligated in a similar fashion. Then with the aid of heavy tumor forceps, a large portion of the gangrenous tissue was dissected away. About one half of the left front quarter and a considerable portion of the two hind quarters was found to be gangrenous and was removed. After the operation 500 cc. of a 40 percent dextrose solution was administered intravenously to help override the absorption of toxic end products as well as to furnish a source of nutrition.

General wound treatment was administered post-operatively and the cow soon came back on feed. A purulent exudate

began to flow from the infected mammary tissue, but drainage was excellent, and slow sloughing with no increase in symptoms occurred.

Second Operation

Twelve days later the cow was again placed on the operating table and large portions of the necrotic mammary tissue including the left rear teat was removed. After this second operation the cow's appetite further improved and two weeks later it was discharged from the clinic. At that time the left side of the udder had been entirely sloughed and the remaining mammary tissue was greatly atrophied. The cow's condition had suffered surprisingly little considering the prolonged period of convalescence. This case is of interest since the surgical procedure employed effectively combatted an ascending gas gangrene infection caused by *Clostr. welchii*.

—Jack M. Nelson, '46

5

Penicillin Therapy in Leptospirosis. Two dogs were entered at Stange Memorial Clinic in April of 1945. One, a five-year-old male Collie, showed symptoms of depression, erythema of the underline, congestion and mild icterus of the mucous membranes, diarrhea, loss of and perverted appetite, and cloudiness of the cornea of the left eye.

The Collie was at first believed to have Black Tongue, until a blood serum agglutination test proved the disease to be Leptospirosis. After the diagnosis of Leptospirosis had been made, the dog was given 50,000 units of penicillin intramuscularly into the gluteal region, and 50,000 units intravenously. For four days thereafter he was given 200,000 units of penicillin daily, in four divided doses. Two of these doses were given intravenously, and two were given intramuscularly. At the end of five day's treatment with penicillin the patient had improved so much, that no further treatment was needed, and five days later the patient had apparently recovered, and was discharged.

Summer, 1945

The other dog, a five-months-old male mixed-gray, entered the clinic several days before the Collie, with a previous history of refusal to eat and convulsions. He exhibited symptoms of straining, abdominal pain, vomition, and reddening of the skin in the perineal region. The condition was diagnosed as Leptospirosis on the findings of a blood serum agglutination test.

Treatment

A sedative was administered to the Mixed-gray dog, to relieve the abdominal pain, and convulsions. Bismuth subcarbonate was given the first day as an intestinal protective. After the results of the blood serum agglutination test were obtained, the patient was given 50,000 units of penicillin via the cephalic vein. The penicillin therapy was repeated four times a day for four days, and an intestinal protective was administered daily. At the end of four days time, the dog was apparently recovered, and the therapy was discontinued. Three days later the dog was discharged.

Agglutination Test

Both of these dogs were infected with *Leptospira canicola*, and the blood serum agglutination test employed is as follows.

1. Supplied known serum	2. Unknown serum 1:10
L. canicola antigen	L. canicola antigen
3. Unknown serum 1:100	4. Unknown serum 1:1000
L. canicola antigen	L. canicola antigen
5. Supplied known positive serum	6. Unknown serum 1:10
L. icterohemorrhagica antigen	L. icterohemorrhagica antigen
7. Unknown serum 1:100	8. Unknown serum 1:1000
L. icterohemorrhagica antigen	L. icterohemorrhagica antigen

These two cases were followed after being discharged, and both dogs have made a complete clinical recovery.

—Sam W. Thompson, '46