Porcine Malignant Edema

R. L. Campbell
Iowa State College

Follow this and additional works at: https://lib.dr.iastate.edu/iowastate_veterinarian
Part of the Large or Food Animal and Equine Medicine Commons, and the Veterinary Infectious Diseases Commons

Recommended Citation
Available at: https://lib.dr.iastate.edu/iowastate_veterinarian/vol3/iss2/17

This Article is brought to you for free and open access by the Journals 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.
Ormsby Ona Inka 1959376 owned by Mr. Ernie Schmobes (on the left in the photograph).

In doing his work in artificial insemination Dr. Merritt uses an artificial vagina to collect the semen in preference to massaging the ampullae of the ductus deferens.

He examines the vagina and cervix of the cow with an eighteen inch glass speculum and flashlight before introducing the semen. The semen is first subjected to a microscopic examination to assure whether or not the sperm are alive. A twenty-four inch glass tube with a bulb syringe connected to one end by rubber tubing is used to introduce the semen. This is accomplished by passing the glass tube through the speculum directly into the cervix and by exerting a little pressure on the bulb the semen is deposited directly into the cervical canal.

—L. T. Christensen, '42

Porcine Malignant Edema. On Dec. 23, 1940, near Brookfield, Mo., an outbreak of malignant edema in a herd of swine was observed. According to the owner 20 hogs developed clinical symptoms within 36 hours following his detection of the first sick animal. After this period no other affected animals appeared. A fox terrier dog known to have eaten a jowl from an infected carcass developed typical malignant edema symptoms within three days and died within a week.

The appearance of similar symptoms in a large number of animals within a short time suggested the possibility of infected food. A few days before the outbreak the owner lost a calf, supposedly from blackleg. As is commonly the practice, the carcass was fed to the hogs.

Three hogs were autopsied and in each the tissues of the pharyngeal region were found to be infiltrated with a yellowish gelatinous fluid. Although not extensive, crepitant areas in the subcutaneous tissues of the throat were noticed. The salivary glands and lymph nodes were markedly swollen and light grey in color. Other tissues and organs revealed no characteristic lesions. In two of the animals old necrotic lesions in the pharyngeal wall were noticed. These lesions
may have served as a point of entrance for the infection.

Termination was rapid, death usually occurred four to eight hours after the first noticeable symptoms. Death was attributed to suffocation due to marked swelling of the pharyngeal region.

All animals showing no clinical symptoms were moved to a new lot and placed under observation. No new cases developed. All affected hogs were killed and burned in the infected lot.

Both anthrax and malignant edema were considered as diagnostic possibilities. In this region anthrax never has occurred, but malignant edema is fairly prevalent, especially in equines and bovines. Since no new cases developed a diagnosis of malignant edema seems justified. One could not hope to control anthrax with the measures taken in this instance.

—R. L. Campbell, '41

Enucleation of a Steer's Eye. A one year old Hereford steer was admitted to the Stange Memorial Clinic, Jan. 5, 1941. The left eyeball was protruding from the orbit, and there was swelling beneath the skin, above and below the eye. The history given was that the steer has been dehorned and infection had entered the frontal sinus. Such a history suggested the swelling resulting from the infection in the sinus had pushed the eyeball out of its bony orbit.

Operation

The steer was placed on the operating table. The area over the left side of the frontal sinus and around the eye was shaved, cleansed and painted with iodine. Two percent procaine was injected subcutaneously as a local anesthetic. A trephine opening was made into the anterior part of the frontal sinus about two inches from the median line. Gas escaped from the opening, showing that putrefaction was present. The swelling just above the eye was opened and proved to be an abscess containing foul smelling pus. On probing into this opening, several small bone fragments were discovered and removed. The finding of these bone fragments along with the abscessation indicated that a severe blow over the eye, instead of infection in the sinus, had caused the eyeball to protrude. A hipp pack (bismuth subnitrate—2 parts, iodiform—1 part, liquid petrolatum—15 parts) was placed into the abscess opening. The eye was washed with a two percent boric acid solution, and merthiolate ointment applied. A pack saturated with two percent boric acid solution was bandaged over the eye and the animal returned to the stall.

The post operative treatment consisted of irrigating the frontal sinus and the abscess opening with potassium permanganate solution (1:2000), and the placing of a sterile normal-saline pack over the eye each day. Sulfanilamide \(\frac{3}{4}\) b.i.d. was given each day. The temperature reached a high of 104° four days after the operation. A few days later, another opening was made below the eye, in order to drain a small abscess.

It was known from the beginning that the eye would have to be enucleated, but this could not be done until the acute inflammatory processes involving the eye and surrounding structures had receded. Ten days after the first operation, the steer was again placed on the table. The area around the eye was shaved, cleansed and painted with iodine. Two percent procaine was injected subcutaneously into the lid margin and deeply around the optic nerve. The eyeball was protruding to such an extent that the lids could not be closed. A silk suture uniting the lid margins was placed near each canthus, leaving ample length with which to exert traction. The skin was incised all around the eye about one fourth of an inch from the margin of the lids. With careful dissection, the conjunctiva was separated from the surrounding tissue down to its attachment on the bony orbit, where it was cut free. No part of the conjunctiva or tarsal glands was left in, because healing would be retarded due to secretions from these structures. While applying