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D. E. Tyler
Iowa State University

M. J. van der Maaten
Iowa State University

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An Ulcerative Condition Involving the Muzzle and Perineal Area of Feeder Cattle

D. E. Tyler, D.V.M.*
M. J. Van Der Maaten, D.V.M.**

There have been numerous reports in the past few years of ulcerative conditions of unknown etiology involving either the oral cavity or perineal area of feeder cattle. (1,2,3,4) The lesions seem to develop primarily as erosive or necrotic areas on the tongue or vulva and may heal rapidly or secondary bacterial invasion may occur with subsequent extension of the lesion into surrounding tissues. This report deals with a condition observed in feeder cattle where ulcerative lesions develop on both the muzzle and in the perineal area.

Histories of three herds involved are as follows:

Herd No. 1—Consisting of ninety-three head of mixed yearling heifers and steers was located in Northwestern Indiana. The herd had been confined in the feed lot for at least three months. Between fifty and seventy head of hogs shared the lot and shelter. The ration consisted of corn silage and commercial supplement containing diethylstilbesterol. The lots were quite muddy but otherwise the conditions were average for that time of the year.

During the last part of January necrotic lesions began to develop on the vulvas of the heifers. These lesions began as small pustules and progressed to necrotic and ulcerated areas that often involved as much as 90 per cent of the vulvar tissue. Later similar lesions were observed on the muzzles of both the heifers and the steers. These lesions were usually confined to the dorsal-medial aspect of the muzzle. Swelling of the perineum and mammary glands was observed in several animals. The lesions did not extend to the anus. Foot involvement was not observed. Lesions did not appear on the tongue or oral mucosa.

The condition progressed rapidly through the herd until all of the animals were affected. By the last of February the lesions, especially on the muzzles, appeared to be healing in most of the animals. Many of the vulvar lesions were still active however, and several were severely secondarily infected. For the most part the animals appeared normal as far as attitude and appetite were concerned. As a rule the heifers were not in as good condition as the steers.

A later report from the local veterinarian stated that the condition persisted in the herd for another month.

Herd No. 2 consisted of sixty-six head of yearling Hereford steers and heifers. The cattle had been confined in a feed lot for about two months. They were being self-fed a ration of whole shelled corn and commercial supplement which contained diethylstilbesterol. Several head of hogs were also in the lot. The sanitation...
and management were above average for such an operation.

Focal areas of necrosis and ulceration measuring from 1-4 cm. in diameter were present on the muzzle, caudal fold and also on the vulva of the heifers. The lesions on the muzzle were most often located at the dorsal-medial border of the nares. Considerable swelling preceded the ulceration which developed on the caudal fold and vulva. The lesions in this region were often extensive due to secondary infection.

Lesions were not observed on the tongue or oral mucosa. Foot involvement was not present.

Other than a slight anorexia and a decreased rate of gain the animals showed little evidence of illness.

The condition spread through the entire herd during the month of December and persisted until the end of January. During this time some animals that had apparently recovered broke with the condition a second time.

Herd No. 3. A herd located in north central Iowa and consisting of approximately ninety yearling steers and heifers of mixed breed was affected. These animals had been purchased in small lots from several sources. They were placed in a feedlot under average sanitary conditions and were fed ground corn and hay. Swine were running with the cattle.

The disease first appeared in the herd in December and cases continued to occur for some time; the last animals being affected did not recover until February. The morbidity was 90 to 95 per cent. The lesions first appeared on the muzzle and were characterized by ulcers approximately 1-3 cm. in diameter. They were most frequently located near the dorsal medial margin of the nasal orifice. These lesions persisted for 1-2 weeks and generally healed without complications. A few days after development of the muzzle lesions similar ulcerative lesions developed in the perineal area, most frequently near the anal orifice or on the caudal fold. Heifers frequently developed lesions on the vulva also. These perineal lesions would occasionally heal without complications as did the muzzle lesions. It was more common however, for secondary bacterial infections to occur in these lesions producing suppurative or necrotic areas of varying size with some lesions progressing to the point that large suppurative pockets would form extending 10-15 cm. in the subcutaneous tissues of the ischio-rectal fossa.

In general only a mild anorexia oc-
A rough hair coat, moderate weight loss, and general unthriftiness were noted in those animals with severe secondary bacterial infections. There was no death loss in this herd.

Discussion

The similarity of the disease in the three herds discussed would seem to point to the fact that this is a recognizable disease entity. Although the etiological agent has not been isolated we have hypothesized that the disease is of viral origin. This is supported by fact that the primary lesions resemble those of several known viral infections; they appear suddenly, spread rapidly through the herd and are initially non-suppurative. A fact that should be kept in mind is that in all these outbreaks swine were running with the cattle. The lesions however, were definitely not traumatic as has been reported in necrotic vulvo-vaginitis. The possibility of swine as carriers of the etiologic agent should not be overlooked.

With material collected from animals in herd number three the following attempts to isolate infectious agents were carried out. Material collected by scraping the lesions was placed in a saline solution containing antibiotics, centrifuged and inoculated into bovine kidney and chick fibroblast cell cultures. No evidence of viral infection was observed in either of these media. Material was also inoculated onto the chorio-allantoic membrane of chicken embryos with negative results. Material obtained by scraping lesions was suspended in saline solution and used to inoculate two 5 month old Holstein calves. Areas on the muzzle and caudal fold were scarified and an intradermal injection was made into the skin of the caudal fold. Results of the calf inoculations were inconclusive in that some swelling and exudation of serum occurred at the site of inoculation, more than would be expected from the trauma alone, but no typical lesions, as seen in field cases, were produced.

It is hoped that this preliminary report will lead to the recognition of additional cases of this apparent syndrome thereby providing material for further study.

Summary

1. An ulcerative condition involving the muzzle and perineal area is described in three herds of cattle.
2. The lesions are characterized by focal necrosis and ulceration of the dorsal medial aspect of the nostrils and of the perineal area. Secondary infection often increases the severity of the lesions.
3. Preliminary studies have failed to indicate the etiology of the condition.

REFERENCES


Farmers Exempt from Mixing Regulations

An amendment clarifying the status of farm mixers of medicated feeds under the registration requirements of the 1962 Drug Amendments was announced today by the Food and Drug Administration.

The amendment, to be published in the Federal Register of April 27, specifically exempts from registration any farmer mixing feed for his own animals who does not have to hold a new drug application, or supplement, or an antibiotic Form 10 to legally add drugs to his feed.

The new amendment grants the exemption without reference to the kind of feed ingredients being used or the kind of animals being fed. The previous regulation exempted farmers using feed concentrates for feeding their own meat animals, provided they used drug concentrates requiring only the addition of grains to make the final feed ration and provided no NDA or Form 10 was required.

FDA said the clarification was intended to answer questions that have been received as to what would be considered "grains" in the feed ration for the purpose of the exemption, and also to make it clear that farmers feeding animals other than meat or food-producing animals are entitled to the exemption.

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