Psuedorabies in the Bovine

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Psuedorabies in the Bovine. Pseudorabies or Aujeszky's Disease has been occurring enzootically in Iowa since its earliest discovery in 1930. As an infectious disease of cattle it is intimately associated with an implacable pruritis, giving rise to the descriptive term, "mad-itch." Of recent interest are two cases submitted to the Iowa Diagnostic Laboratory for autopsy.

Case No. 21. On Jan. 25, 1952, a cow, 4 years of age, was brought to the laboratory. The animal exhibited a nervous incompetency and constant shaking of its head. Excessive salivation was also observed to be present. The head was denuded and bloody, with marked edema present in the poll region, around the eyes, and along the margins of the mandible. The history presented by the owner indicated six animals of a herd of 45 had been lost in a short period of time. The animal presented was first noticeably affected five days previously.

Autopsy revealed few gross lesions other than congested viscera and scattered petechia. In addition to the routine bacteriological procedures, an emulsion of the brain tissue was prepared and inoculated into the region of the flank of a rabbit. Five days following the inoculation suggestive symptoms were evident in the rabbit. Malaise followed by anxiety and excitability preceeded the cutaneous hyperaesthesia. Licking of the site of infection gave way to chewing in an attempt to allay the intense itching. Marked destruction of the tissues surrounding the area resulted. Death of the rabbit occurred on the sixth day.

Case No. 2. On Feb. 2, 1952, a bovine head was brought to the laboratory for examination. The animal had been destroyed after showing symptoms suggestive of rabies. Within the preceeding week the owner had lost three animals exhibiting similiar nervous disturbances. Prior to destruction of the last animal, attempts by the animal to chew at its side were observed.

Inoculation of a laboratory animal with a brain tissue suspension produced the characteristic symptoms and injection site lesion in three days; death followed on the fourth day.

Rats and swine are often implicated in the obscure transmission of this disease. Therefore, it is interesting to note that in Case Number 1, extremely large numbers of rats were known to be present on owners premises the previous summer. How and if any interrelation between rats and cattle exists in this outbreak would

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be difficult to ascertain. In Case No. 2, a somewhat unusual situation likewise existed in that pigs in the feed lot had been noticed to suck the affected animal prior to onset of the disease. To assume that the swine, in this case with their singular habit, can be indicated as transmitting the disease again gives rise to interesting conjecture, but would be difficult to establish.

Coming from two divergent sections of the state, these apparently spontaneous outbreaks prove the disease to be one of increasing importance. The rapid and generally fatal course, as well as the intense itching, differentiate this disease from rabies. Only rarely do affected animals become aggressive as is commonly seen in rabies.

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2 Leptospirosis and Prostatitis in a Dog. A 5-year-old male English Pointer was presented at the Stange Memorial Clinic on Oct. 22, 1951, with a history of bloody discharge in the urine after working. The patient was quite active and alert. Bowel movements, appetite, temperature pulse, and respiration were within normal limits. The animal showed muscular build but was rather thin. The patient urinated frequently and had a purulent discharge from the prepuce. Nephritis, prostatitis, and leptospirosis were suspected. Palpation of the abdomen showed little or no symptoms of pain or abnormal masses or displacements. Palpation of the prostate glands per rectum showed some enlargement with a slight flinching response by the dog. Examination of the coxo-femoral articulations revealed crepitations in both hip joints; especially when the patient was forced to pivot on its hind legs, but no pain or hindrance to normal movement was manifested.

The following day, about 10cc. of blood-tinged urine were obtained by means of a catheter for darkfield examination. Laboratory findings were positive for Leptospira. Microscopic fecal examination was negative for parasite ova. An x-ray picture was made of the lateral abdominal and pelvic regions. The x-ray studies revealed a suppurative prostatitis, productive coxo-femoral arthritis, and spondylitis.

One gm. of dihydro-streptomycin was administered intramuscularly in the left thigh. On Oct. 25, 1951, a urine sample was presented for bacteriological culture and revealed a pure culture of *Staphylococcus aureus*. The treatment was consequently changed to penicillin, consisting of 300,000 units of penicillin in oil and 400,000 units of aqueous penicillin intramuscularly. This was followed by 300,000 units of penicillin in oil daily for the next two days.

On October 28, the purulent discharge from the prepuce was almost entirely gone, and the patient was alert and active. Urine examinations showed negative results for *S. aureus* or Leptospira.

On October 30, another urine sample was presented to the laboratory and reports indicated that it was also bacteriologically negative. The patient was discharged on Nov. 11, 1951.

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3 Rabies in a Beef Heifer. On Oct. 16, 1951, a 9-month-old Angus-Hereford heifer was admitted to the Stange Memorial Clinic. The only history available was that the owner had noticed nervous symptoms in the animal. A clinical diagnosis of rabies was made at this time.

The patient was able to stand but it was trembling and was weak on its legs. Water was offered but the patient promptly upset the bucket, indicating she had little control over her movements. Also, the heifer “bawled” loud and often. Her temperature the first day in the clinic was 96.5°C.

The following day, the patient was unable to get up. She had been bawling all morning and the sound was changing to a hoarse and bull-like bellow. The feces were extremely dehydrated, indicating that the patient had not drunk any water since the previous day. The temperature was 98°F.

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