Myeloid Leukemia of the Dog

Harry L. Quick

Iowa State College

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

Part of the Small or Companion Animal Medicine Commons, and the Veterinary Physiology Commons

Recommended Citation

Quick, Harry L. (1945) "Myeloid Leukemia of the Dog," Iowa State University Veterinarian: Vol. 7 : Iss. 4 , Article 11.
Available at: https://lib.dr.iastate.edu/iowastate_veterinarian/vol7/iss4/11
An Abscess in the Mandibular Area of the Horse. On February 9, 1945, a 10-year-old sorrel mare was brought to the Stange Memorial Clinic with a diagnosis of alveolar periostitis. The horse had a swelling in the left mandibular area similar to one caused by an infected tooth. A speculum was placed in the horse's mouth but there was so much swelling that an examination was impossible. The swollen area was hot packed for the next 4 days to reduce the swelling, and then the mare was given one and one-half ounces of chloral hydrate via a stomach tube as a basal sedative and restrained on the operating table. A speculum was placed in the mouth to facilitate palpation to determine which tooth was involved. It was at this time that the swelling was found to be due to an abscess in the cheek and not an infected tooth. The mucous membrane of the cheek was forced between the teeth by the swelling so mastication was extremely painful. It was decided to drain the abscess to the outside, to avoid packing of the abscess cavity with food if opened to the inside of the mouth, with resulting delay in healing.

The swollen area was shaved and painted with tincture of iodine. An incision about 5 cm. long was made and a deep abscess was located just medial to the masseter muscle. An incision was made about 5 cm. anterior to the first incision in order to secure better drainage. A seton soaked in liquid bipp (bismuth subnitrate 1 part, iodoform 2 parts, and liquid petrolatum 16 parts) was placed through the two incisions and the cavity was packed with sterile gauze.

Further Treatment

The next day the packs were removed. The area was hot packed for 45 minutes. The wound was irrigated with potassium permanganate 1:3000. A new seton soaked in liquid bipp was applied. For the next two days the same treatment was administered, but the irrigation with potassium permanganate was omitted.

From the fourth day to the tenth day after the operation the area was soaked with hot packs for 30 minutes daily. The incisions were flushed with 5 per cent sodium perborate solution. A new seton soaked with liquid bipp was replaced each day.

The seton was discontinued on the tenth postoperative day and the wound was injected with liquid bipp for the next 5 days.

On the sixteenth day the gum line was no longer swollen in the area of the abscess and granulation was progressing nicely. The horse was eating well and was not as gaunt. No further treatment was administered. The horse was discharged the twenty-eighth day after entrance to the clinic, apparently recovered. This case indicates the need for a careful examination before a definite diagnosis is made, even though first indications resemble very closely some well known disease entity.

—James R. Arnold, '45

Myeloid Leukemia of the Dog.

Leukemia is a general systemic disease which is relatively common in the dog. Irrespective of its high incidence, the veterinary profession has not as yet uncovered the etiological factors involved in this insidious disease, and, as in too many of our disease problems, there has never been a satisfactory treatment discovered.

Chronic Course

The disease usually runs a chronic course and recovery is exceedingly rare. Adult, or aged, male animals are predominantly affected. Acute cases, terminating fatally within a few weeks, are sometimes seen in younger animals.

A typical case of myeloid leukemia, presented to the Stange Memorial Clinic on February 2, 1945, was a 2-year-old male fox terrier, which hadn't eaten for the past five days, was showing slight dyspnea, mental depression, rapid pulse, and pallor of the mucous membranes.

Leucocytosis was immediately suspected by the attending clinician, and a blood examination confirmed the diagnosis. The leucocyte count was 81,260 per cu. mm. or approximately eight times that of the normal dog. A severe anemia was indi-
cated by the R.B.C. count of 2,100,000 per cu. mm. There was a striking increase of myeloid leucocytes and unsegmented neutrophils, but the lymphocyte count was not materially changed. This latter finding distinguishes the myeloid type of leukemia from the lymphatic type.

In an attempt to temporarily allay the progress of the disease 7 gr. of liver-stomach concentrate, 3 gr. iron and ammonium citrate were given daily along with 10 cc. subcutaneous injections of liver-vitamin B complex solution.

**Increased Severity**

The symptoms became increasingly severe until the sixth day when euthanasia was recommended to alleviate the animal's suffering.

Contrary to expectations, the autopsy did not reveal any marked enlargement of the spleen or of the lymph nodes. However, a nodule in the spleen was demonstrated upon sectioning of the tissue. The liver was enlarged with myeloid tissue and the marrow of the bones was gelatinous, greyish-red in color and scanty in amount. Infarction of one kidney was noted. The mucous membrane and internal organs were very bleached, as was expected from the blood picture.

This is but one of the many diseases that are not fully understood by our men of science, but it is a serious and common enough condition to merit considerable thought and recognition. Opinion as to the causation of the disease is at present very undecided.

For many years it was thought to be due to an unrecognizable organism—possibly a virus that was transmissible from one animal to another. It was even demonstrated that intravenous injections of infected bone marrow emulsions into cows produced a typical leukemia. This theory has gradually given way to the neoplasm theory which contends that the pathogenic agent is an unknown body contained in the blood, probably enzymic in nature, produced by either chemical, mechanical or infectious agents which excite neoplastic changes in the cells of the hemopoietic organs. This unknown body is able to pass through the Berkefeld filter. The infective agent is thermolabile and is destroyed in half an hour by a temperature of 132° F.

---Harry L. Quick, '45

---

# Atrophy of the Supraspinatous and Infraspinatous Muscles in a Young Colt

Atrophy of the supraspinatous and infraspinatous muscles is quite common in the equine, especially in the draft breeds. This condition is commonly referred to as sweeney. In most cases the atrophy is due to pressure on the suprascapular nerve at the point where it crosses the neck of the scapula. A common cause of this pressure is an improperly fitted collar. Another common cause is working a green colt on a heavy load until he becomes tired and in resting himself he pulls sideways.

In this particular case, which was presented at the Stange Memorial Clinic, the nerve pressure was caused by the colt crowding through a narrow doorway beside his mother and bruising his shoulder on the door frame. The colt was three months old at the time of the injury.

The history on the case revealed that considerable swelling and lameness appeared in the colt immediately following the injury. It was thought at this time that the scapula or the proximal end of the humerus was fractured. However, after ten days the swelling began to disappear and the lameness gradually improved and finally it also disappeared. The swelling continued to diminish until finally the muscles were atrophied to such an extent that the owner thought that the bone of the shoulder was enlarged. Examination, however, showed the bone structures of both shoulders to be equal in size.

**Clinical Symptom**

When the colt was brought to the clinic the only clinical symptom was atrophy of the supraspinatous and infraspinatous muscles. A decision was made to use the routine sweeney treatment in this case. A mixture of oil of turpentine and chloroform was prepared. Tincture of iodine was applied generously over the atrophied...