

4**Metastatic Carcinoma in a Bitch.**

On May 15, 1951 a 10-year-old female Kerry Blue Terrier was admitted to the Stange Memorial Clinic for treatment. The history indicated that a cystic fibroadenoma was removed from the abdomen on Dec. 7, 1950. The patient had been coughing and seemed sore for several months previous to admittance.

There were enlargements on the abdomen, possibly indicating mammary tumors, and great enlargement of the metatarsals was noted. The swollen and hard metatarsals were not painful when palpated.

The following day the patient was given $\frac{3}{4}$ gr. of morphine and placed on the operating table in dorsal recumbency. The region around the left inguinal mammae was shaved, scrubbed with soap and water, defatted with ether, and sprayed with isopropyl alcohol. Ether anesthesia was administered to effect. Two parallel incisions about two and one-half in. long were made over the most anterior inguinal mammary tumor. It was found that both tumors were in a common capsule so they were removed together, mostly by blunt dissection. A small inguinal hernia was found beneath the tumorous growth. It was repaired by suturing the inguinal ring with catgut. Twelve dermal sutures were used to close the skin incision and an adhesive bandage was applied.

The histopathology of the mammary neoplasms indicated cystic fibro-adenocarcinoma. A blood sample obtained from the patient had a sedimentation rate of 68 mm. in one hour. Since the average rate is 5 to 25 mm., the high rate of sedimentation indicated the possibility of a malignancy. A lateral thoracic radiograph and one lateral and one A.P. radiograph were made of the left metatarsus.

The x-ray showed subperiosteal proliferation around the metatarsal bones. Adjacent joints were becoming involved. The x-ray of the thorax showed extensive involvement—neoplastic growths destroyed an estimated one-half of the functional lung tissue. The skull was not involved. The metacarpal bones were be-

coming involved, although not nearly as much as the metatarsals.

The radiographic examination showed hypertrophic pulmonary osteoarthropathy. In man this condition is called "clubbed hand" and causes excessive growth and thickening of fingernails and toenails. Any chronic disease of the lungs or heart may produce this condition. Most commonly the lungs are affected. The exact cause of the bone proliferation is not known, but is believed to be due to edema as the result of anoxemia. Thus, the distal extremities are always affected first. As the condition progresses long bones are involved, then the flat bones, and finally the condition may become generalized. The exostosis forms a ring around the bone beneath the periosteum. There is poor lime content at first, becoming progressively harder until it is impossible to distinguish from normal bone. The condition may be retrogressive, at least partially, if the primary cause is obliterated. In this case, nothing could be done to stop the process.

In this case we assumed that the carcinoma of the mammary glands was the primary condition. Metastasis to the lungs initiated the secondary condition. The lung involvement resulted in anoxemia and development of the hypertrophic pulmonary osteoarthropathy.

The wound edges were in apposition and the area was free of exudate when the bandage was removed on the day following the operation. Although the patient was slightly depressed, it was discharged since the owner had come from a considerable distance. It is not known how long the patient continued to live despite the metastatic involvement of the lungs.

Marvin E. Clark '52

5

Abscessation in a Bovine. A yearling Hereford female was admitted to Stange Memorial Clinic on May 7, 1951, with a history that she staggered and fell down at various intervals.

In the clinic the patient rolled on her side and would then get up and try to

kick both of its elbows but would stagger and fall in the attempt. When down a muscle twitching was noted in the front limbs. A rolling inward of the eyeballs was noted as well as several subcutaneous lumps on the left side of the head. A blood picture was as follows:

R.B.C.	8,550,000
W.B.C.	28,400
Stabs	5,800
Segments	16,400
Lymphocytes	6,200

On the second day the animal showed the same symptoms together with expiratory dyspnea. Finally she could not stand at all although kicking movements at the left elbow could be initiated if a spot about 12 in. posterior to the point of the elbow on the thorax was rubbed.

The patient expired on May 9, and necropsy revealed the following lesions:

(1) Abscessation at the base of the brain involving the medulla and pons, (2) Impaction of the omasum and acute catarrhal enteritis, (3) Lungs were 30 per cent atelectatic from a former bronchitis, (4) Six chronic abscesses in the subcutis on the left side of the head, (5) An 11 cm. embryo indicating about a 2½ months pregnancy. The frontal sinus showed no gross infection although the patient had been recently dehorned.

The nervous symptoms noted and cause of death were probably due to the abscessation eventually spreading to the base of the brain. The etiology of the abscessation was not determined.

Russell H. Anthony '53

6 **Suppurative Pododermatitis.** On July 17, 1951 a one-year-old Guernsey heifer was admitted to the Stange Memorial Clinic. She was lame on the left front leg. Further examination of the affected leg revealed a fistulous opening on the lateral side of the claw just above the hoof. The owner suspected a foreign body, possibly a piece of glass, to be the causative factor.

An x-ray picture was taken. No marked evidence of suppurative arthritis

could be seen, nor did any foreign objects show up in the picture. The foot was cleaned and a phenol-formalin pack (0.18 per cent phenol, 0.12 per cent formalin) was put on the foot. On July 20, the patient was placed on the operating table, in a right lateral recumbency, for an examination. The condition of the claw was worse and it was deemed necessary to amputate. The left front leg was clipped, shaved, scrubbed and painted with a tincture of iodine. Two per cent procaine hydrochloride was infiltrated into the area of the second phalanx. The left claw was amputated through the middle of the second phalanx and a tourniquet was applied. A sterile pack with sulfathiazole powder was put on the wound and the leg was bandaged before returning the heifer to her stall. The tourniquet was removed one half hour later.

Two days after the operation, the pack and bandage were removed. The wound was clean and appeared to be healing properly. A sulfonamide-urea-lactose powder (10 percent sulfanilamide, 5 percent sulfathiazole, 20 percent urea, 65 percent lactose) was applied to the wound and the leg was bandaged again. The next day, the wound was irrigated with KMnO4 1:3000. Sulfonamide-urea-lactose powder was again applied and the leg bandaged. By July 31, the heifer was beginning to use the left foot quite well and she moved about freely.

On August 6, the wound was irrigated with KMnO4 1:3000 and sulfanilamide powder applied. The wound was healing by granulation and the epithelium was growing toward the center of the wound from all edges. A durable bandage was placed on the foot and the heifer was discharged from the clinic.

Robert E. Gamble '53

7 **Separation of the Symphysis Mandibulae.** A mixed Collie, one-year-old, was admitted to the Stange Memorial Clinic on July 12, 1951. Early diagnosis supposed a broken jaw. The dog was placed on the operating table in left