

CLINICAL MEDICINE

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1 **Rachitis in a Horse.** Rachitis is a deficiency disease of the osseous system characterized by an excess of newly formed bone that fails to calcify. The disease is caused by an imbalance of the calcium to phosphorus ratio or a deficiency of either mineral. The presence of vitamin D is an essential factor if there is a major imbalance in the Ca:P ratio. A 2-year-old female Quarter-Horse was



View showing front legs of horse. Note "Knee Sprung" stance of the horse.

admitted to Stange Memorial Clinic on January 10th. She had been purchased 6 months ago from a ranch in Texas and was taken to Minnesota. The horse had a history of never having been worked, yet the animal began to exhibit a lameness which increased in severity. The mare stood with the knees bent forward. The owner, thinking the condition was "knee-sprung", blistered the legs. The condition caused the animal to be down continuously for 3 weeks in the stall due to pain. She then began to raise herself by hooking her lower jaw over the manger and pulling herself up, resting in that position with as little weight as possible on the front legs.

The horse appeared in good condition, the main lesion being a firm enlargement of the carpi. Deep digital pressure over the distal end of the radii at the epiphyseal junction produced pain.

Lateral and A-P radiographs were taken of the right and left carpi. A diagnosis was made of a severe rachitis with

incomplete epiphyseal separation of the distal radial epiphysis of the right carpus.

The horse was given 200,000 units of vitamin A and 100,000 units of vitamin D intramuscularly, and 2 oz. of Clovite® (Fort Dodge, contains vitamins A, D₂, D₃ and B₁₂ also Dicalcium Phosphate, Thiamine, Riboflavin, Pantothenic Acid, Niacin and Choline.) with 1½ oz. of bone-meal sprinkled on the feed.



X-ray of right carpus. Note widened epiphyseal line (arrow).

The oral medication was repeated every day until the horse went home. The same amount of injectable vitamin A and D was administered again 5 days after the original dose. The animal was discharged on Jan. 18.

Both Texas and Minnesota are known to have phosphorus deficient areas. Due to the recent drought, hay from these areas was of poor quality and what oats the horse was getting may have been deficient in calcium. The vitamin D content of such feed would be negligible, the

only source being the limited amount of sunlight available.

Without knowledge of the dietary history one can only postulate as to the origin of the trouble. Subclinical rickets is believed to remain undetected in a large percentage of the horse population of this country.

— Bob Carithers, '56

2

Myositis With Calcification In The Bovine.

A 6-year-old Angus cow was admitted to Stange Memorial Clinic on December 28, 1955. The animal was suffering from a myositis with calcification in the left front leg. The carpus was fixed in complete flexion, rendering the limb entirely useless. The animal also had a vaginal prolapse which had been caused by the lunging gait and the tremendous muscular exertion needed to rise.

History revealed that the cow had the injured leg when the owner purchased her 6 months ago. She had been injured a year previous to the owner's purchase by an unknown cause. At one time the cow had been an extremely valuable animal. The owner wanted a calf from her if the condition could be corrected or alleviated.

A thorough physical examination was made and failed to show any secondary pathological complications. Radiographs revealed that the carpus was relatively normal in structure. The animal was then placed on the table and prepared for surgery. The entire left front leg was clipped and shaved. After scrubbing with surgical soap, the area was disinfected with alcohol.

The skin was incised lengthwise on the lateral side of the radius with a scalpel. Upon palpation and examination it was found that the tendons and fascia as well as the muscles were extensively calcified. The flexor muscles as well as the superficial and deep flexor tendons were severed with a blunt bistoury midway between the carpus and fetlock joints. Considerable traction was needed to straighten the leg to a position of extension. Once