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What's your Radiographic Diagnosis?

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into pathologic and regenerative changes which the pancreas may be capable of undergoing. In this case a pancreas which was visibly inflamed and necrosing was found lesionless six weeks later. In another case recently admitted at Stange Memorial Clinic, the dog was admitted with a serum lipase level of 16 c.c.u. The dog died before further tests could be run; and on necropsy, no lesions were found in the pancreas.

What’s Your Radiograph Diagnosis?

By
William Blevins, D.V.M.*

This 8 year old female Dachshund was admitted to the Stange Memorial Clinic on March 14. The owners complained that the dog was very sensitive around the head and neck. They first noticed the condition two weeks ago, but it appeared to get better. Now the condition is worse.

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On physical examination it was noticed that the dog stood with the head low and held the neck rigid. The dog experienced excruciating pain when the neck was flexed and extended. Lateral and ventrodorsal radiographs were taken of the cervical region.

(Answers on page 83)

Figure 1. Lateral radiograph of the cervical vertebrae.

Figure 2. Ventrodorsal radiograph of the cervical vertebrae.
Answers to What's Your Radiograph Diagnosis

Diagnosis

Herniated intervertebral disc at C6-7.

Discussion

Herniated intervertebral discs usually occur in dogs that are middle aged or older, although younger dogs may be afflicted. Intervertebral disc lesions in the cervical region tend to cause a pain syndrome rather than paralysis; however, herniations in the posterior cervical area can cause a lameness in the front legs. Occasionally the disc herniation is severe enough to cause quadriplegia.

The onset and duration of clinical signs are governed by the kinetics of the herniation. A severe, acute herniation can cause almost immediate paralysis. If the disc material herniates slowly, the clinical signs may be insidious and progressive. There are probably some herniated discs in the cervical region that develop slowly enough that clinical symptoms are not observed. Periods of recovery and exacerbation are not uncommon.

Radiographic diagnosis of herniated intervertebral discs is made by observing a narrowed intervertebral disc space and/or disc material in the intervertebral foramen. Less than 40% of the herniated intervertebral discs meet these criteria on a plain radiograph. When these signs are not manifest, a positive diagnosis must be made with contrast radiography or necropsy. Calcified intervertebral discs cause no clinical symptoms unless they are protruding into the neural canal or are herniated.

Treatment

Cervical intervertebral disc herniations are treated either conservatively or surgically. Conservative therapy consists of restricting the animal’s activity and administering anti-inflammatory drugs. Surgical therapy consists primarily of disc fenestration; however, decompression laminectomy has been used.

Disc fenestration is probably the best method of treatment, since it prevents continual rupture of a particular disc. The disc is stabilized, and once the initial inflammation has subsided, this particular disc will not be a source of future irritation. If conservative therapy is used, a particular disc may be a continual source of irritation until all of the disc material has herniated.

FORT COLLINS, COLO.—An in-depth study of the environment in which the dog embryo develops is under way at Colorado State University in Fort Collins. The two principal investigators, William J. Tietz, Jr., D.V.M., Ph.D., and James F. Masken, Ph.D., are studying the factors influencing the development of the embryo immediately after conception.

With this information, the investigators believe that more effective methods of controlling animal breeding can be developed. Such methods could be used for birth control, reduction of skeletal and cardiac defects, and improvement of breeding efficiency where desirable.

In addition, it is particularly hoped that the information may be applied to the problem of providing more guide dogs for the blind. Presently, guide dogs must be drawn from the ranks of the male of the species, but with the ability to efficiently control the estrous cycle, females could also be used effectively, doubling the guide dog candidates.

The study is beginning with controlled breeding in the University’s dog colony. Dr. Tietz said at least two years will be required to arrive at any conclusions.

The study is financed by the Seeing Eye, Inc., of Morristown, N.J., through the Morris Animal Foundation of Denver.

They are supervising the work of Joseph Spano, D.V.M., and hope the study will increase veterinary knowledge of the reproductive cycle in the dog.