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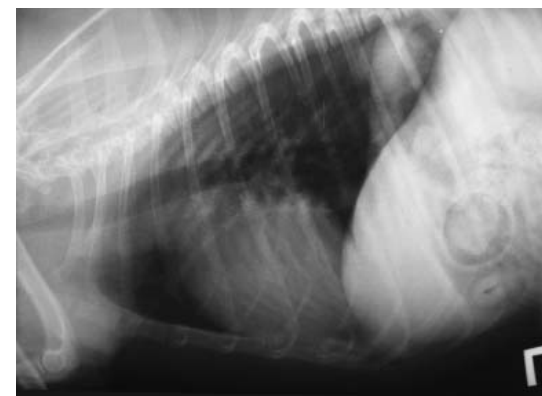
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What's Your Diagnosis?

This is a new feature to Metropolitan Minutes. Review the case study and images below to see if you come up with the correct diagnosis. Look inside to find the answer.

Signalment and history:

A 12-year-old female spayed Jack Russell terrier presented with a history of a solitary mammary carcinoma in situ (incisional biopsy performed by the referring veterinarian). A three-view metastasis check of the thorax was obtained. Review the left lateral and ventrodorsal images below to determine your diagnosis.



Left Lateral View



Ventrodorsal View

Help us Update our Mailing List

You can assist in our efforts to keep pace with the changing local veterinary population. If you are receiving copies of this newsletter for someone no longer at your practice or would like to add someone, please call Kelli Riley at 330.670.2355. Thank you!

Idiopathic Head Tremors of English Bulldogs

By Bradley Stephens, DVM

Lucy, a two-year-old female spayed English bulldog, presented to the Metropolitan Veterinary Hospital Emergency Service with seizures, which the owner described as rapid head tremors. The owner stated that the episodes never involved any pre-ictal or post-ictal phase, loss of consciousness, urination, defecation or other autonomic signs typically seen with grand mal seizures. Lucy would walk around and respond to her name while she was in the middle of the episodes. The patient was referred to Northeast Ohio Internal Medicine Associates for further workup.

A mysterious affliction

The initial physical examination was unremarkable, with the exception of a right grade II medial patellar luxation. The complete blood count and serum chemistry panel were within normal limits. A CT scan of Lucy's head, including bone and soft tissue structures of the forebrain and cerebellum, was unremarkable.

A phone consult with Dr. Marc Kent, a neurologist at the University of Georgia Veterinary Teaching Hospital, was sought. He indicated that these clinical signs were consistent with a condition tentatively called "Idiopathic Head Tremors of English Bulldogs," or IHT. The condition consists of rapid up-and-down or side-to-side movements of the head only. They start and stop spontaneously and are not related to any identifiable pathology or seizure condition. They typically occur while the animal is resting and may occur during sleep. Although this condition is most commonly seen in English bulldogs, a similar condition has been described in boxers and Dobermans.

Possible causes

Many explanations have been formulated for the cause of the tremors, such as a seizure focus with no forebrain involvement or a defect in the elements of the muscle fibers. The current theory is that the tremors are a result of dysfunction of the proprioceptive fibers in the neck. Abnormal sensory input, causing alternating contraction and relaxation of muscle groups, may be responsible. This explanation, while almost impossible to prove, would explain why those affected stop shaking if something is done to focus their attention on an object such as a toy or treat.

With this condition there are no abnormalities on tests such as CBC, chemistries, infectious disease titers, CSF taps or on imaging studies such as radiographs, CT or MRI. Therefore, IHT is confirmed based on clinical condition and through exclusion of other disorders.

Treatment for this disorder with anti-seizure drugs such as phenobarbital, potassium bromide, Gabapentin or Keppra has not been successful and is not recommended. Many neurologists recommend offering the animal something to "focus" its head position, such as a treat or toy, which supports the idea that this is actually a movement disorder and not seizure-related.

No cause for concern

Animals with IHT do not progress to have actual seizures and do not have issues with quality of life. The tremors are innocuous to the patients. Symptoms other than head tremors may indicate concomitant disease, requiring further investigation. Patients with IHT have only head tremors. The tremors may persist for the duration of the animal's life, but often stop completely. IHT should be strongly considered in any English bulldog, boxer or Doberman that is experiencing compatible clinical signs of intermittent head tremors.



Specialist Spotlight:

Cockatoo Cloacal Prolapse Syndrome

by Gary Riggs, DVM, DABVP, Avian

A common presenting problem for adult cockatoos (in particular umbrella and Molluccan cockatoos) is chronic or intermittent cloacal prolapse. This condition can vary in its severity from chronic fecal pasting of the vent to severe vascular compromise with tissue necrosis, which often requires emergency surgical intervention. Commonly, the birds show minimal distress, although straining and discomfort are sometimes present.



Diagnosis
The first step in the evaluation is to determine what tissue is involved. Cloacal examination,

especially utilizing fluid enhanced endoscopy, should be undertaken to ascertain if it is the oviduct (in the female) or to clarify which chamber of the cloaca may be involved. The endoscopic procedure also will help demonstrate the severity of cloacal stretching that may have occurred, which will influence the type of surgical approach required to correct it.

Workup of the problem involves a thorough history and physical exam, including blood work and radiographs. The history should focus on diet, reproductive history and the length of time the problem has existed. Blood analysis is important to help rule out underlying problems, infection or inflammatory issues, or even nutritional deficiencies (hypocalcemia). Radiographs are important to rule out a mass effect causing increasing abdominal pressure, fluid buildup in the intestinal peritoneal cavity, or to help in assessing hormonal or reproductive activity. In some cases, heavy metal toxins such as lead or zinc can contribute to this syndrome and radiographs also can be helpful for screening for these.

The underlying etiology of the problem is often difficult to positively identify and may be multifocal. Hormonal activity or repro-

ductive behavior is often in the history, but a direct causal relationship is often difficult to establish. Muscle herniation, possibly secondary to repeated jumping or falling in wing-trimmed birds, has been implicated. It is possible that the impact causes sudden increases in intra-coeleomic pressure, resulting in muscle weakening in the lower abdominal wall and cloacal rim area. Another possibility is a neurogenic dysfunction of unknown etiology, resulting in cloacal rim dysfunction. A common characteristic, especially in chronic cases, is a marked cloacal rim laxity. This loss of sphincter tone allows urodeal and proctodeal



tissue to prolapse easily with any straining. A change from the normal round sphincter shape to an elongated oval sphincter is often seen in these cases, accompanied by a rolling out of the rim and fecal and urate adhesions. Repeated biopsies of affected tissues have yet to yield a unifying etiology.

Treatment
Treatment of the problem involves first addressing any underlying problems that can be identified. Nutritional or inflammatory etiologies should be corrected and reproductive activity should be halted in females by the use of GnRH hormonal blockers or implants. If necessary, a temporary cloacal rim reduction, utilizing bilateral vertical mattress sutures, can be placed in the vent to help protect tissues during pre-operative treatment.

Surgical correction of the prolapse is usually required for chronic or severe conditions. The procedure involves securely pexing the urodeum to anchor the tissue bilaterally to the ribs, pelvic bones and/or to the body

wall. In severe cloacal distensions, cloacal reduction surgery is performed prior to the pexy procedure. If the bird is female, we will usually perform a salpingectomy at the time of surgery to minimize any future hormonal complications. The final phase of the surgical procedure addresses the cloacal laxity. A bilateral full thickness cloacal wedge resection is performed to improve cloacal rim tone. The number and size of the wedge resections will vary based on the severity of the individual case.



Aftercare
Post-operatively, analgesics and anti-inflammatories are used to facilitate healing. Strict activity restriction

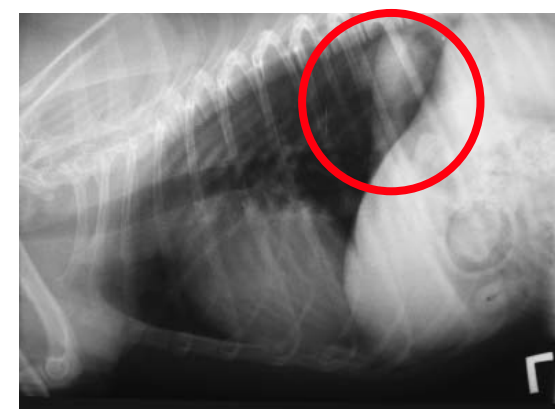
is advised for the first two weeks and no flying or freedom for strenuous activity is advised for an additional four weeks. It is important to closely monitor the cases for the first three to four days post-op to make sure that normal fecal and urate passage is possible. It is not uncommon to have to use mild cloacal flushing techniques in the first few days to prevent buildup.

Because a definitive etiology is most often not appreciated, the surgical correction is a control rather than a cure. Strict dietary and husbandry control as well as behavioral management may be necessary to minimize recurrence. Keeping the bird full-winged to minimize "crashing" and discontinuing activities that encourage courtship behavior are advised. If necessary, long-term hormonal blockers are indicated to help reduce reproductive causes. Research of this syndrome is needed to investigate the underlying pathophysiology and possible etiological agents, if any, that may trigger this problem. Until then, early diagnosis, thorough workup and timely surgical intervention are the key factors to minimizing this potentially life-threatening condition.

What's Your Diagnosis?

Radiographic findings:

A well-defined, circular, soft tissue opacity is seen on both views. On the left lateral view, the opacity is superimposed over the left crus of the diaphragm, which, because the patient is on her left side, is cranial to the right crus of the diaphragm. On the ventrodorsal view, the soft tissue opacity is superimposed over the right crus of the diaphragm.



Left Lateral View



Ventrodorsal View

The patient was taken to surgery. A right caudal lobectomy was performed, as well as an excisional biopsy of the mammary mass. Biopsy of the pulmonary mass revealed a primary bronchogenic carcinoma. There was no evidence of regional metastasis to the tracheobronchial (hilar) lymph nodes. Biopsy of the mammary mass revealed a mammary carcinoma. Both tumors were removed in their entirety, and the patient is doing well.

Assessment:

Solitary mass within the right caudal lung lobe. Differentials for a solitary pulmonary mass include a primary lung tumor, a solitary metastatic mass, an abscess, a fluid-filled cyst, a granuloma and hematoma.

Comments:

Most solitary pulmonary masses in elderly dogs are primary lung tumors and are most often found within the right caudal lung lobe. Despite the patient's history of a mammary carcinoma, solitary metastatic masses are extremely unusual.

Future Notes

Hear Metropolitan Veterinary Referral Group Members Presenting at Conferences

- Jan. 18, Feb. 8 and March 7, 2007** – Mustard Seed Market, Solon, Ohio – Dr. Sivula's topic, "Integrative Medicine for Pets"
- Feb. 18 and 19, 2007** – Western States Veterinary Conference, Las Vegas, Nev. – Dr. Sivula's topic, "Veterinary Spinal Manipulative Therapy"
- March 17-25, 2007** – Backbone Academy for Veterinary Chiropractic and Healing Arts, Sittensen, Germany – Dr. Sivula's topics, "Basic Animal Chiropractic" and "Craniosacral Therapy for Animals"

Practice Points

As winter sets in, the underwater treadmill at **Dancing Dogs Animal Wellness Center** is becoming more in-demand to provide exercise and rehabilitation options. In the area of pain relief, Dr. Sivula has been pleased with the performance of a new microcurrent stimulator. This device can be used in the office or sent home with the client for short-term daily use. Positive results also have been seen with some new herbal formulations for pain relief. Dancing Dogs encourages behavior referrals; we combine behavioral consultation with integrative medical therapies. We are sponsoring a series of behavioral clinics on Feb. 28 and March 5, 14 and 28, 2007 at the Mustard Seed Market in Montrose. Topics will include "Animal Behavior and Overview," "Common Feline Behavior Problems," "Common Canine Behavior Problems" and "Prevention of Behavior Problems and What to do When they Occur." For information about these or any of our other services, contact us at 330.664.6504.

Vet-Rad is pleased to welcome Dr. Rachel Bowlus. Dr. Bowlus joins radiologists Bennett Fagin, Bill Weber, Marianna Schafer and Todd Henrikson. Dr. Bowlus attended The Ohio State University College of Veterinary Medicine and completed a three-year residency in radiology at the Kansas State University College of Veterinary Medicine. She is an accomplished sonographer and is skilled at interpretation of radiographs, CT and MRI images. Vet-Rad provides diagnostic imaging support for the Metropolitan Veterinary Hospital and consulting services for hundreds of veterinary hospitals across the United States. To speak with a Vet-Rad radiologist, call 330.666.2976.

Contact Us

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