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NEXT GRAND ROUNDS

DATE:

Wednesday,
September 16th at 7pm

SPEAKERS:

Terri Cole, DVM, Diplomate ACVIM, and
Kendra Carlson, DVM

TOPIC:

Endocrine Emergencies:
Emergency Presentation and
Medical Management

This meeting will be held in the education center on the second floor of the Fox Valley Animal Referral Center.

Please RSVP to Lyn Schuh at (920) 882-4304 or at LSchuh@horizondvm.com

Esophageal Foreign Bodies

Jennifer M. Cyborski, DVM

Key Points:

- *Esophageal foreign bodies are emergencies.* The longer they are present, the greater the risk of potentially life-threatening complications such as esophageal perforation.
- Small breed dogs are the most common patients to present with an esophageal foreign body.
- Acute signs include ptyalism, regurgitation (often reported as “vomiting” by the owner), dysphagia, and anorexia.
- Prognosis is good if addressed promptly (within 24 hours)—before severe esophageal damage occurs.
- The ideal method for removal is endoscopy.
- Hydration and nutrition needs should not be overlooked as part of the treatment plan.
- Long-term complications can include esophageal stricture.

Diagnostic and Treatment Details:

Most esophageal foreign bodies can be diagnosed on history, symptoms, and plain film thoracic radiographs. Occasionally, contrast studies are performed to confirm a suspected foreign body or after removal to look for esophageal perforation. An organic iodide contrast agent is recommended at 0.5-1.0 ml/kg. Risks include aspiration pneumonia if regurgitated. Barium is contraindicated if perforation is suspected.

Ideally, referral for endoscopic removal is preferred as this allows for controlled removal and

evaluation of esophageal mucosal integrity. Antegrade advancement into the stomach via a blind technique using a rigid orogastric tube (under general anesthesia) increases the risk of esophageal perforation.

Thoracic radiographs are recommended after removal of the foreign body to look for pneumomediastinum or pneumothorax which would indicate a perforation has occurred. Exploratory thoracotomy is recommended in cases of perforation or severe esophageal necrosis.

Mild esophagitis can be treated with gastroprotectants (e.g. sucralfate slurry), an H2 receptor antagonist (famotidine, ranitidine) or proton pump blocker (omeprazole), and by withholding food for 24 hours before starting a soft gruel diet.

Severe esophagitis may require the placement of a gastrostomy tube or PEG tube for esophageal rest.

Short-term complications include esophageal perforation, bronchoesophageal fistulas, and aspiration pneumonia. Long-term complications may include esophageal strictures and secondary megaesophagus.

FVARC Case Summary:

“Winston” was a 3 year old male neutered Maltese who presented for “vomiting” of 3 days duration. Symptoms began after he ate part of a ham bone. On physical



examination he was depressed, 6% dehydrated, and febrile at 103 F.

CBC, chemistry and electrolyte panel showed no significant findings. Abdominal radiographs were normal, but a soft tissue density was visualized in a portion of the caudal thorax. Upon further questioning of the owner, Winston was actually regurgitating. A contrast esophagram was performed, confirming an esophageal foreign body.

Winston was rehydrated and started on broad-spectrum IV antibiotics in preparation for endoscopy which showed a ham bone firmly lodged in the distal esophagus. Multiple attempts at retrograde (per oral) removal were unsuccessful. The bone was advanced into the stomach. Unfortunately there was focal esophageal mucosal damage noted. Post-endoscopy thoracic radiographs confirmed a perforated esophagus (pneumothorax with mild pleural effusion noted).

Winston was taken to surgery where an exploratory thoracotomy was performed to repair the esophageal perforations, flush the thoracic cavity, and place a thoracotomy tube. The ham bone was removed in conjunction with gastrostomy tube placement via a modified left gastrostomy incision; however, the bone likely would have been digested in the stomach and passed without causing an obstruction.

Winston recovered in the ICU with a fentanyl CRI and IV ticarcillin-clavulanate, metronidazole, and famotidine. The next day his thoracotomy tube was removed and medications (tramadol, Clavamox, metronidazole, omeprazole) as well as feedings were given through his gastrostomy tube. Oral sucralfate slurry and water ad lib were started 24 hours after his surgery.

Winston was discharged two days after his surgery. His esophagus was "rested" for one week before soft foods were introduced. The gastrostomy tube was removed two weeks later as he was eating well. The owner reported occasional regurgitation for 1 month, but 4 months after his adventure with the ham bone, Winston is doing well.



Lateral thoracic radiograph showing an esophageal foreign body

Resources:

1. Leib M, Sartor L. Esophageal foreign body obstruction caused by a dental chew treat in 31 dogs (2000-2006). *J Am Vet Med Assoc* 2008;232(7):1021-5.
2. Leib M, Sartor L. The diagnosis and management of esophageal foreign bodies. *Conference Proceedings: ACVIM 2007*.
3. Sellon RK. Esophagitis, foreign bodies, and esophageal strictures. *Conference Proceedings: Western Veterinary Conference 2007*.
4. Rousseau A, Prittie J, Broussard J, et al. Incidence and characterization of esophagitis following esophageal foreign body removal in dogs: 60 cases (1999-2003). *J Vet Emerg Crit Care* June 2007;17(2):159-163.
5. Halling KB, Kruth S. Complications and long-term outcome of dogs with esophageal foreign body—59 cases (2000-2005). *Conference Proceedings: ACVIM 2006*.
6. Jones BD. Management of esophageal foreign bodies. In: *Kirk's Current Veterinary Therapy XI*. W.B. Saunders Company, 1992:577-80.



STAFF BIOGRAPHIES

Committed to Friendly Care and State-of-the-Art Medicine

Elizabeth L. Breuhl, DVM, MS, Diplomate ACVIM

Department: Small Animal Internal Medicine
Special Interests: Urology (laser lithotripsy), infectious disease, immune-mediated disease, endocrinology, medical neurology, gastroenterology, and minimally invasive diagnostics.

Education: MS in veterinary clinical sciences from Purdue University, 2005; DVM from the University of Wisconsin-Madison, 2001; BS from UW-Madison, 1997

Internship: Rotating internship in small animal medicine, surgery, and emergency medicine, Alameda East Veterinary Hospital, Denver, CO

Residency: Small animal medicine, Purdue University School of Veterinary Medicine, 2002-2005

Certification: Board certified by the American College of Veterinary Internal Medicine in 2008

Dr. Elizabeth Breuhl grew up in Kenosha, WI and spent eight years in Madison as an undergraduate and veterinary student. Following graduation, she was fortunate enough to spend a year in Denver enjoying the Rocky Mountains and working at Alameda East Veterinary Hospital, home of Animal Planet's "Emergency Vets." She continued her studies at Purdue University, earning a masters degree and completing a residency in small animal internal medicine. She accepted a position to stay

Dr. Elizabeth Breuhl



on for an additional year as a clinical instructor in the Veterinary Teaching Hospital. She found it very rewarding to educate residents, interns, and veterinary students while at the same time expanding her skills.

Dr. Breuhl welcomed the move back to Wisconsin to be closer to family, friends, and her second career— that as an active member of the Wisconsin Air National Guard.

Dr. Breuhl and her husband Jason have a son named Wesley, a German shepherd named Dargo, and a calico cat named Ivy. In her free time, Dr. Breuhl enjoys spending time with her family, reading, jogging, good coffee, knitting, and being outdoors.

In and out of the clinical setting, Dr. Breuhl is known for her bubbly personality and infectious laugh. Clients and their companions will appreciate her gentle bedside manner and expertise in internal medicine.

WHAT'S NEW — Community Events and Announcements

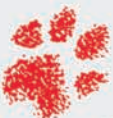
94th Annual WVMA Convention

October 8-11, 2009 at the Monona Terrace in Madison. Click link below to learn more.

<http://www.wvma.org/displaycommon.cfm?an=1&subarticlenbr=61>

Future Grand Rounds

December 16, 2009 Topic: Head Trauma.
Speaker: Lisa Peters, DVM



Announcements

Congratulations to Dr. Elizabeth Breuhl whose co-authored study of unfractionated heparin therapy in dogs with primary IMHA was recently published in the Journal of the American Animal Hospital Association. Click link below to read the article.

<http://www.jaaha.org/cgi/content/abstract/45/3/125>

Neomycin/Polymyxin/Bacitracin Anaphylaxis in Cats

Alan H. Brightman, DVM, MS, DACVO

Since September 2000 there have been an increasing number of reports of acute anaphylaxis resulting in death in cats after exposure to ophthalmic

Neomycin/Polymyxin/Bacitracin (Neo-Poly-Bac).¹ There is also one case involving Neomycin/Polymyxin/Hydrocortisone (Neo-Poly-HC) anaphylaxis in which the cat survived the initial exposure but died of renal failure days later. The reaction occurs shortly after exposure to the eye medication. Clinical signs noted in these cats were profuse salivation, vomiting, dyspnea, incoordination, and cardiovascular collapse.

It is recommended that Neo-Poly-Bac not be used to treat any disease of the cat eye and should not be used as a lubricating ointment during anesthesia.

The mechanism of action causing anaphylaxis in cats has not been established, but in man there is a report of temporary difficulty in swallowing, speaking, and

breathing attributed to disturbance of neuromuscular transmission by absorption of eye drops containing both neomycin and polymyxin B.² This is likely the mechanism of toxic reaction in a select population of cats.



References

1. Plunkett, S. Anaphylaxis to ophthalmic medication in a cat. *J Vet Emerg Crit Care* 2000 Jul-Sep;10(3):169-171.

2. Grant, WM. *Toxicology of the Eye*. 3rd ed. Springfield, IL: Charles C. Thomas Publisher, 1986: 659.

