The Veterinary Medical Center–Dublin also offers 24-hour emergency care for ill and injured companion animals, supported by a state-of-the-art intensive care unit and board-certified critical care specialists.

Tetanus is a fairly uncommon condition for dogs. In most cases, it is introduced into the tissues through a deep wound that provides a suitable anaerobic environment for clostridium to grow and release the toxin. Once the tetanospasmin enters the CNS, it binds irreversibly and blocks the release of inhibitor neurotransmitters, causing the classic signs.

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Canine Tetanus Treatment Requires Time and Care

The companion animal Intensive Care Unit routinely treats pets with an assortment of medical and surgical diseases for an average of two to three days. But occasionally we see animals with less common, challenging conditions that can take weeks to treat successfully. This was the case with Skye, a young female pit bull mix.

Skye presented to the VMC Emergency Service with characteristic signs of generalized tetanus – a furrowed brow, sardonic grin, lock-jaw and stiff forelimbs. Her initial physical exam also revealed that she had a warm, swollen and painful digit associated with a split toenail. The clinicians quickly suspected that this was the site of clostridial infection. Skye was taken to surgery and her toe amputated to control the source of infection and help slow progression of signs.

I hope you will enjoy reading this issue of Update for Veterinarians, where we focus on three unusual and challenging cases presented to the Emergency and Critical Care units of our companion animal, farm animal and equine hospitals. Many times, the quick referral of family veterinarians is an important factor in successful outcomes. We thank you for your confidence in referring cases to us!

We are also happy to announce that we will be offering a new dialysis service for companion animal cases. Please see page 4 for more details on the service, under the direction of Dr. Catherine Langston. You will also see an update on the status of our new MRI service.

We’re happy to help you meet the needs of your patients with new services such as these, as well as to provide emergency and specialty care when you need it. Please let me know if there is anything we can do to continue to upgrade our hospitals and improve our service to you.

Dr. Edward Cooper and Skye, after successful treatment of tetanus.
Discovering Sebastian’s Secret

Like infants, animals can’t tell their doctors what is wrong with them. In most cases, their skilled doctors can quickly diagnose their condition. But when the patient is a miniature pig – who has secretly eaten part of his blanket – things aren’t so straightforward.

Sebastian, a 1-year-old castrated male miniature pig, originally presented the day after Christmas to Farm Animal Medicine and Surgery at the VMC with an acute onset of vomiting and small, desiccated fecal balls. His owners explained that Sebastian didn’t like to drink water and normally had to be encouraged; during the excitement of the holidays they thought he probably didn’t drink as much as he should have.

The resident on call, Dr. Joseph Lozier, did an ultrasound and radiographs; the only major abnormality they showed was a gas-filled colon. He diagnosed Sebastian with dehydration and constipation as the likely cause of his vomiting and abnormal feces, and suggested that the owners offer the pig flavored water and high fiber fruits like apples and strawberries. Dr. Lozier expected that with the fluids and another enema Sebastian would soon be back to his normal happy self.

But Sebastian returned to the VMC the next day with no improvement in his symptoms. New abdominal radiographs showed an area in the stomach that was suspicious for a foreign body. When Dr. Lozier performed an upper GI endoscopy, he discovered Sebastian’s secret: a small remnant of blanket. Suspecting that there might be more, he and Farm Animal Section Head Dr. Andrew Niehaus, DACVS, performed an exploratory laparotomy.

In the small intestine, they found a large section of plicated intestines resulting from a piece of ingested blanket. When they attempted to remove it via enterotomy, the friable intestinal loops tore, and Sebastian needed resection and anastomosis.

Because of the surgeons’ skills, Sebastian’s prognosis is good. But there’s also a good chance he might show up at the VMC again.

“Because Sebastian is known to eat non-food material, he’s at increased risk for having an intestinal foreign body again in the future,” said Dr. Niehaus.

“We told the owners that they should probably try to keep him away from the blankets,” he added.
Equine colic case reveals gastrointestinal tumor

At the VMC, we strive to work with our referring veterinarians as an extension of their practice – whether it’s for specialty care or in emergency situations. Although the emergency team at the Galbreath Equine Center most often treats common conditions like colic, diarrhea, fractures, respiratory and neonatal conditions, sometimes these common conditions involve complicated treatments.

When Polly, a 13-year-old Haflinger mare, refused water and grain one evening, her owner Kim Miller treated her with Banamine. When Polly was found to be down and rolling the next morning, her veterinarian Dr. Robert Marshall performed rectal palpation which revealed distended bowel, and he diagnosed an acute case of colic. Polly was also tachycardic and unresponsive to medical management with IV fluids and refluxing. At this point, he referred her to the VMC for treatment.

Polly continued to show signs of abdominal pain on admission to the VMC, and after the initial ultrasound showed severe small intestinal distention, the team recommended surgery. Head of Equine Services Dr. Margaret Mudge, DACVS, DACVECC, performed an exploratory celiotomy. She found approximately two feet of jejunojejunal intussusception and a mass in the wall of the small intestine, evidently the cause of the colic. The small intestine in the affected area appeared thickened, distended and non-motile, and was determined to be non-viable.

“Because fluid was unable to pass through the obstruction, material further down Polly’s intestines became dry and she developed a large colon impaction at the site of the pelvic flexure,” said Dr. Mudge.

Dr. Mudge and the surgical team not only had to remove the mass, but also resect four feet of jejunum and perform an enterotomy at the pelvic flexure to remove the dry material. A histopathological review determined that the mass was most likely a spindle cell sarcoma. Fortunately for Polly, this tumor type usually produces only a single mass and tends to be less malignant.

“Intestinal tumors are really uncommon in horses. So while the resection and anastomosis were fairly routine, the tumor and intussusception were a surprise. Polly’s surgical procedure (end-to-end jejunojejunostomy) has a very good prognosis, in large part thanks to her early referral,” said Dr. Mudge.

Kim reports that Polly is doing very well nearly four months later – and was happy to get back to the pasture with her other friends after her recuperation.

“I think she bucked and kicked for several minutes in thankfulness of her freedom once again!” she said.
New dialysis program for companion animal patients

The Veterinary Medical Center is offering a clinical dialysis program! Led by Dr. Cathy Langston, a leading authority on nephrology, the VMC’s new dialysis program can be an important part of your treatment plan for your patients.

“Traditionally, dialysis has been used to give time for the kidneys to heal from an insult or for antibiotics to treat an infection,” said Dr. Langston. “It can also help stabilize an animal in preparation for surgery; for example, to remove an obstructing ureterolith.”

But dialysis can be used to do more than treat kidney disease. If a pet has ingested a toxic compound or received a drug overdose, the dialysis process may be able to remove the substance much faster than the animal’s normal metabolism. Depending on the substance ingested, it may be removed by standard dialysis, or the blood may be percolated over a form of activated charcoal to bind the toxin.

The PrismaFlex dialysis machine can also remove “dirty” plasma through apheresis, said Dr. Langston.

“For example, if large amounts of immunoglobulin are causing disease, such as with myasthenia gravis, plasmapheresis can help to alleviate symptoms long enough for an immunosuppressive therapy to start working,” she said. She noted, however, that plasma can’t be collected for transfusion with this technology.

The VMC recommends that you consider dialysis for patients with the following:
- Acute kidney injury of any cause
- Oliguria or anuria
- Hyperkalemia
- Acute intoxications (please check with the dialysis team to see if dialysis is indicated)
- Select immune diseases (myasthenia gravis, some immune-mediated hemolytic anemia cases)

Please note, the VMC is not treating chronic kidney disease at this time but plans to offer this service in the near future.

Dr. Langston is also presenting a series of online lectures on topics in nephrology, beginning March 17. The sessions are scheduled for noon to 12:45 p.m. on the third Tuesday of every month. You can register for these free CE lectures at vet.osu.edu/vet-expert-express.

For more information about the lectures, or about the dialysis program, please contact Dr. Cathy Langston at langston.35@osu.edu or 614-292-3551. You may also contact the VMC internal medicine or critical care team at 614-292-3551, if you have a case you feel could benefit from dialysis.

Welcome Dr. Runcan!

Dr. Erin E. Runcan
Assistant Professor – Practice Theriogenology

Dr. Runcan is a 2009 graduate of the Ohio State College of Veterinary Medicine. After her graduation, she completed a one-year internship in small animal medicine and critical care at the VCA Veterinary Specialty Center of Indiana. Dr. Runcan completed a residency in theriogenology at the University of Florida and became board certified by the American College of Theriogenologists in 2012. Since completing her residency, Dr. Runcan has worked in private small animal practice at the Fairfield Pet Hospital in Lancaster, OH. She has also served as a course instructor in equine theriogenology at Ohio State. Dr. Runcan’s clinical interests include comparative theriogenology with a special interest in high-risk pregnancy and parturition.

MRI update

Our new 3-Tesla 70cm bore MRI unit is scheduled to be operational in May. For more details, please contact the specific specialty service area (neurology/neurosurgery, equine, etc).

Companion animals: 614-292-3551
Farm animals/equine: 614-292-6661