

THE RALPH

December 2020 Edition

HELLO!

As 2020 draws to an end we naturally reflect on the year behind us, and look forward to the year ahead. Whilst we all experienced matters outside of our control this year, which turned the simple things in to the not-so-simple things, we look back fondly upon the willingness of our veterinary community to rally in support of our patients and each other. As for the year ahead, who knows what it will bring, but we hope that it will bring joy, kindness and compassion.

Here's to 2021 and the adventures ahead.

Take care,

TEAM RALPH

TEAM ANNOUNCEMENTS



The start of something new: our Referral Nurse Internship Programme!

We have just launched our Referral Nurse Internship Programme with the first cohort of eight qualified RVNs.

Over the space of a year, Louise, Evie, Emily, Katie, Heather, Kristine, Josh and Jodie will rotate across a number of The Ralph's twelve core services, and will be allocated mentors to support their learning in each department.

Reflective practice will be a key part of the programme, with formative and summative assessments to test critical thinking, skills competency and depth of clinical knowledge.

Julia Cox DTLLS RVN V1 A1, Nurse Training Coordinator at The Ralph, says, "I'm really

excited to be involved in the development of this supportive learning programme. It will assist nurses to bridge the gap between primary care nursing and referral level nursing, and help them to advance their careers."

Emily, one of the Nurse Interns, said, "Knowing a few people who work at The Ralph and who have

spoken so highly of its care and compassion towards patients and staff, I was really excited to hear of this RVN internship where I will get the opportunity to learn about all areas of referral nursing, particularly those I haven't had much experience in having only worked in first opinion previously. I am excited to begin my journey at The Ralph."



£100 FOR YOU AND £100 FOR A CHARITY OF YOUR CHOICE

We want to hear from you! Participate in our survey for the chance to win.

Scan the QR code or visit www.theralph.vet/survey2020

This competition is open to all members of the veterinary profession.

WIN!

ETHYLENE GLYCOL TOXICITY

With the winter months upon us the prevalence of ethylene glycol toxicity cases sadly increases. Our Emergency and Critical Care Intern, Millie Fitzmaurice, and Community Engagement Lead, Toni Hicks RVN, share their top tips for what to do and how to manage these patients.

1

Early recognition is critical.

Consider ethylene glycol (EG) toxicity as a differential for any patients who have access to the outdoors, and present with acute neurological signs (ataxia, obtundation, 'acting drunk') or hypocalcaemia (tremors, panting, agitation, hyperthermia).

Nursing tip: Create a calm and quiet environment for your patients by minimising noise and dimming the lights. As patients often present with marked neurological signs, they will be very reactive to light and sound.

2

It doesn't take much.

Just a small amount of EG can cause significant clinical signs. The lethal dose for dogs is 6.6ml/kg and 1.5ml/kg for cats, although signs of toxicity (as listed in tip 1, plus acute kidney injury (AKI)) can be seen at doses below this.

Nursing tip: Patients with EG toxicity will need close monitoring. It is important to tailor your nursing plan based on the severity of the clinical signs, and to monitor trends in the patient's vital parameters (including: temperature, blood pressure, heart rate, respiratory rate, bladder size and mentation).

3

Beware of false results.

Due to the presence of fluorescent dyes placed in some antifreeze products, use Wood's lamp examination of vomitus or urine to detect EG within the first 4-6 hours following ingestion. However, be careful as this is not a sensitive or specific test. Some drugs (such as benzodiazepines) can cause false positive results due to the fluorescence of their urine metabolites, and not all EG products contain fluorescent dyes, so false negatives can occur.

Nursing tip: When examining urine under a microscope, look for crystals. Calcium oxalate crystals are found in the urine of animals who have ingested ethylene glycol.



*Toni Hicks RVN and
Millie Fitzmaurice
MRCVS VetMB
MA(Hons)
GPCert(ExAP)*

4

Act fast for effective treatment.

In the liver, EG is metabolised by the enzyme alcohol dehydrogenase (ADH) into toxic metabolites. Ethanol is a competitive inhibitor of ADH, allowing time for renal excretion of non-metabolised EG. Fomepizole is a potent inhibitor of ADH with fewer undesirable side effects compared to ethanol, but is expensive and not widely available. To be effective, administer these treatments within 6–8 hours of EG ingestion in dogs, and within the first 3 hours in cats.

Nursing tip: Assess mentation every time you interact with the patient. If your patient is being treated with an IV infusion of ethanol, one side effect can be marked mentation depression.

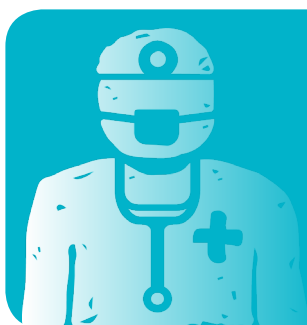
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Fluid therapy must be carefully planned and continually reassessed.

Attempting to force diuresis with high fluid rates is not beneficial and can potentially be harmful for animals who have oliguric or anuric renal failure, as these patients are at high risk for volume-overload. Volume overload leads to interstitial oedema and ‘compartment syndrome’ of the kidney within the renal capsule, hence adversely affecting renal perfusion, reducing glomerular filtration rate (GFR), and worsening acute kidney injury (AKI).

Initially, use fluid therapy to correct the estimated percentage dehydration based on clinical examination. Following this, match the rate of fluid administration with the rate of fluid losses, which should be assessed every 2–4hrs (‘matching ins and outs’). Measure ongoing losses by placing a urinary catheter and carefully measuring the rate of urine production. If urinary catheter placement is not possible, regular body weights (q4–6h) can be used to approximate overall fluid balance, but this is far less sensitive.

Nursing tip: For feline patients able to use their litter tray, you can use this to provide an approximate urine output. Weigh the litter tray before placing it into the kennel and record this alongside the time. Weigh the litter tray after urination and work on a formula of 1g to 1ml of urine. This is not an accurate measure but can help to provide a guide.



If you have any concerns, then early referral to a specialist centre should be considered in patients with compatible history and clinical signs.



Ginger presented to our Orthopaedic Service for assessment of pelvic limb lameness in October 2019. She was reluctant to walk and appeared lame especially after over-exercising. Despite the fact she struggled to get up on her pelvic limbs, she appeared grossly sound at walk on presentation.

Orthopaedic examination revealed moderate discomfort on manipulation of the hip joints (the left appeared worse), especially in extension. Her hocks and stifles appeared otherwise normal (no signs of cruciate ligament disease or patella luxation). Radiographs taken by the referring vet practice revealed severe coxa valga and subluxation of both femoral heads with mild osteoarthritic changes. Radiographs also confirmed the stifle joints to be normal. It was concluded that Ginger's discomfort was caused by severe hip laxity. Surgical options were discussed with Ginger's carers, who elected for a total hip replacement.

Ginger underwent a 3-month course of hydrotherapy (to increase the muscle tone of her pelvic limbs), along with joint supplements and the occasional use of NSAIDs prior to surgery on the left hip a few months later.

At surgery the left femoral head appeared deformed and the dorsal acetabular rim appeared severely damaged by the subluxated femoral head. A BioMedtrix cementless total hip replacement was subsequently successfully performed.



Pre-operative X-ray showing severe hip dysplasia with laxity

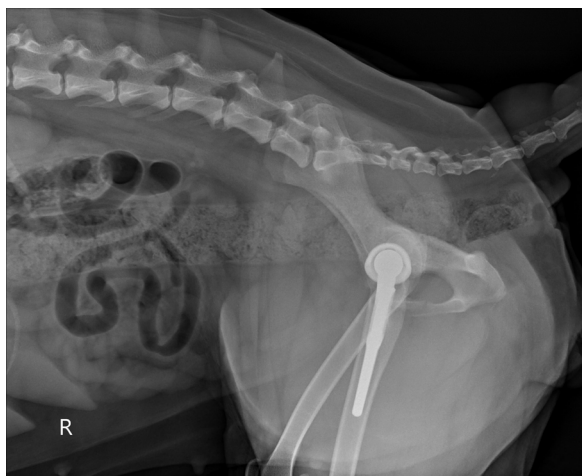


Post-operative X-ray showing placement of the implant



DID YOU KNOW?

Our Orthopaedic Service is led by Alan Danielski DVM MRCVS DipECVS European and RCVS Specialist in Small Animal Surgery and Stefano Genoni DVM(Hons) PgC(SAS) MRCVS RCVS Advanced Practitioner in Small Animal Surgery. They are supported by a dedicated surgery team.



Lateral view post-operative X-ray taken at Ginger's follow up appointment



Ginger at home recently

Ginger recovered well from the general anaesthesia and she remained hospitalised with us for three days. Analgesic and anti-inflammatory drugs were dispensed at discharge. Ginger was instructed to have strict crate rest for 6 weeks and lead-only walks for 12 weeks.

Ginger's carer was thrilled with her recovery over the following weeks and he reported no lameness at the time of the six-week follow-up appointment. Orthopaedic examination of the operated left hip revealed no discomfort on manipulation and full range of motion. Radiographs confirmed stable implant positioning.

Hydrotherapy was started with the aim of increasing the muscle tone of the pelvic limbs and reducing any stiffness associated with the operated hip joint. Surgery on the contralateral limb was scheduled for six months later, and took place earlier this month. Ginger is recovering well.

SUCCESS!



Cleo was presented to the Emergency and Critical Care (ECC) Service in December 2019 for evaluation of signs of lethargy, pain, hypersalivation, facial swelling, and vomiting.



Cleo's swollen face and tongue

Upon presentation Cleo was found to have a foul-smelling mouth and marked ptyalism, but no oral lesions were noted at the time. Diffuse swelling was detected around the joints of all four limbs causing pain while walking but no neurologic deficits were present. The remainder of her clinical exam was normal.

Following admission Cleo developed severe respiratory distress due to upper respiratory tract obstruction secondary to marked swelling of her tongue. It was necessary to perform emergency intubation and start mechanical ventilation. Dexamethasone was started at 0.2mg/kg IV q24hr and resulted in a significant improvement in the

swelling of her tongue. Arthrocentesis was performed whilst Cleo was under general anaesthesia and biopsies of the tongue were taken. In addition, blood was sampled and sent for infectious disease testing.

Haematology and biochemistry results were consistent with Cleo's non-specific inflammatory state. The joint aspirates revealed marked neutrophilic inflammation consistent with immune mediated polyarthritis (IMPA). There was suspicion of possible *Ehrlichia morulae*, despite negative *Ehrlichia* PCR and antibody tests!

Given her history of travel and our suspicion of *Ehrlichia* infection, we decided to start Cleo on doxycycline 10mg/kg PO q24hrs, and prescribed a course of 28 days in total. Indeed, our suspicions were confirmed when an *Ehrlichia morulae* was later identified in one blood smear.



Cleo in our Intensive Care Unit

Within 36 hours we were able to wean Cleo off mechanical ventilation. Initially she was dysphoric and non-visual but fortunately recovered well. Her vision returned and she was bright, alert, responsive, cardiovascularly stable, comfortable on palpation of her joints and ambulatory. Cleo's respiratory rate and effort remained increased following mechanical ventilation; lung ultrasound revealed ventrally distributed B-lines consistent with likely aspiration pneumonia. This is not surprising given the upper respiratory tract obstruction, dyspnoea and mechanical ventilation. Cleo was started on potentiated amoxicillin clavulanate 20mg/kg PO q12hrs for 10 days in total.

Over the next few days Cleo remained stable and her respiratory rate and effort improved. Pulse oximetry (SpO₂) readings and arterial blood gas analysis revealed that she was oxygenating well on room air. Cleo was discharged home to continue her recovery with her family.

During the initial follow-up appointment with our Internal Medicine Service Cleo appeared very bright and back to her normal self. The prednisolone dose was slowly reduced, and the doxycycline had been finished. The long term plan following Ehrlichiosis includes blood tests after 3 months, then 6 months looking for delayed complications (for example CKD/ lymphopenia) and tapering of prednisolone therapy.

Cleo has been weaned off all medications, and remains treatment-free since July. She celebrated her second birthday in October, and her family reports she is doing very well.



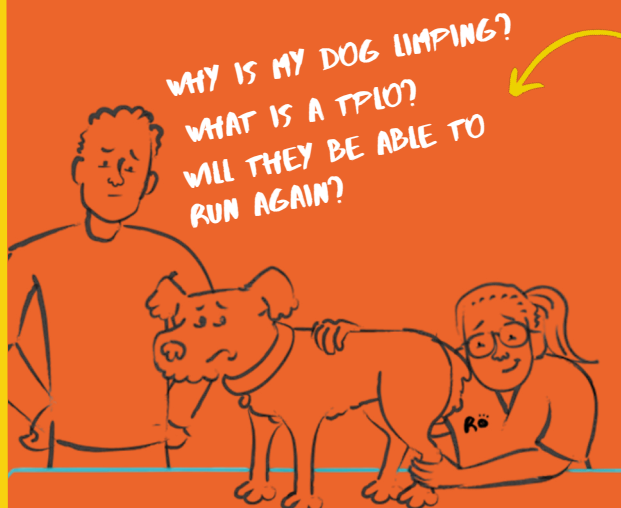
Cleo at home recently

LEARNING POINT:

Trust your clinical suspicions! Despite blood tests coming back negative, our Internal Medicine team suspected there was an underlying condition causing Cleo's symptoms. Don't rule something out entirely, despite a negative test.



FOR YOU: NEW RESOURCE COMING SOON...



Do these questions sound familiar?

We've created an **animated video** on cranial cruciate ligament rupture and **TPLO surgery**. The video explains the condition and what's involved during surgery and recovery. We hope it will support you in practice, and help your clients understand more about the condition.

The video will be **freely available** for you to use and share with your clients. Keep an eye on our social media for more information!

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