Warby St Vet Hospital Newsletter

and Wangaratta Equine Hospital

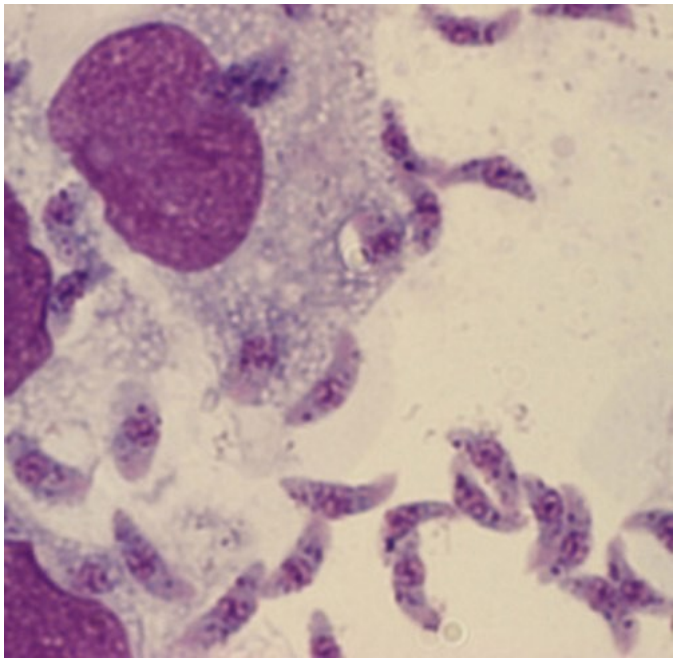
WINTER 2013

Winter has arrived early with a burst of cold and wet weather in late May. Hopefully a sign of things to come for good winter rainfall on our farm land. Time to get some firewood and rug up.

Toxoplasmosis

Toxoplasmosis is a disease caused by the microscopic protozoan *Toxoplasma gondii*. The natural host is the cat, but the organism can infect most warm blooded animals. Its main significance is the effect it has on domestic cats and also its zoonotic potential (ability to spread to humans).

Like most protozoans *Toxoplasma* has a complex life cycle. The reproductive process in the intestines causes oocysts (eggs) to be passed in the feces of the cat. The oocysts mature in the environment and are ingested by other animals, particularly mice (but also pigs). The oocysts rupture in the intestinal tract and the microscopic organisms within invade the wall of the gut and enter the blood stream. From the bloodstream they invade the tissues (muscle, brain) and form cysts. The cat then eats the prey animal tissues containing these cysts and the life cycle is complete.



Toxoplasma gondii organisms under the microscope

Most cats infected with *Toxoplasma* show no clinical signs. However, occasionally clinical disease will develop. The signs are often indistinct including fever, inappetance and lethargy, but may be clearer if a particular organ is invaded. Pneumonia can be attributed to the parasite, as can central nervous system signs like seizures and bizarre behaviours. The parasite can also affect the eyes causing blindness. Clinical disease in cats is usually related with immune suppression that allows the parasite to leave the intestinal tract. When testing for Toxoplasmosis it is also a good idea to test for Feline Immunodeficieny and Feline Leukemia Viruses as these are common causes of immune suppression.

Inside this issue:

Unfortunately the same scenario of tissue invasion can occur in humans infected with the parasite and the worst situation is infection of pregnant women where abortions have sadly been documented. The cat has largely been blamed as the culprit for human infections, however there is growing evidence that undercooked contaminated meats (usually pork) that contain cysts are just as likely a source of infection. Either way good hygiene after handling the cat should be the cornerstone of prevention. Pregnant women should take great joy in kindly asking another household member to take over the kitty litter duty for the duration of the pregnancy.

Tim Craig BSVC
Warby St Veterinary Hospital

Teflon - the silent killer

Do you have birds inside? If you also use non-stick cookware, they may be at risk of Teflon toxicity.

Non stick cookware (not only the 'Teflon' brand) contains polytetrafluoroethylene. This substance is safe at normal cooking temperatures, but when overheated produces a toxic gas that birds are exquisitely sensitive to. Overheating may occur when a frypan is left on the stove a few minutes too long. Humans and mammals are not affected by this, but the delicate respiratory system of birds and their high metabolic rate make them very susceptible to air borne poisoning.

Non stick cookware can include frypans, saucepans, cake pans and utensils.

Signs of toxicity are difficulty breathing, falling off the perch, seizures/convulsions, and sudden death. The smaller the bird, the more susceptible they are to toxicity. Canaries are often affected.

The gas causes fluid build up in the lungs, and the birds may have raspy breathing, or breath with their mouth open.

If you notice your bird showing any of these signs while you have non-stick cookware on the stove, turn off the heat and take the cookware outside. Open windows to allow ventilation. Contact your veterinary surgery if the bird is having difficulty breathing or is convulsing.

You do not have to remove all Teflon coated cookware from the house if you have birds inside, but ensure that it is not left unattended on the stove and overheats, and try to avoid having birds in the kitchen.

Dr Sarah Cavill BVSc (Hons)

Newsletter Mailing List

We produce a 4 page newsletter every season to keep our clients informed about the goings on at Warby St Veterinary Hospital and the Wangaratta Equine Hospital. We send the newsletter out with our statements each time it is printed, but also deliver it electronically by email. If you would like to receive the newsletter in your email inbox you can either email me your address at tim@warbyvet.com.au or fill out the slip below and return it to Warby St Vet Hospital or Wangaratta Equine Hospital in person or by snail mail.

YES! I'D LIKE TO RECEIVE THE QUARTERLY WARBY ST VET HOSPITAL NEWSLETTER BY EMAIL!

NAME: .....

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"KING VALLEY RUN"

A service for routine work provided most **TUESDAYS** charging travel fees from:

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Bute Overdosing in Horses

If 5ml is good, 20mls must be better right? Beware the dangers of 'Bute' overdose.

Phenylbutazone ('Bute') would have to be the most commonly used and misused drug in equine veterinary medicine, particularly in the paste formulation. It is a pleasant shade of green, smells nice, is easy to administer and you have a whole tub of it. If used correctly it is an excellent and potent medication used to treat musculoskeletal pain and inflammation. It does however have very real toxic effects. These can be exacerbated by prolonged usage, and brought on quite suddenly by overdosage.

Phenylbutazone is in a class of drugs known as non-steroidal anti-inflammatories (NSAID's). This is the same class of drugs that human ibuprofen (Nurofen) is in. NSAID's effect the production of prostaglandins throughout the body. Blocking prostaglandins results in decreased pain, fever and inflammation, which is the desired effect. Unfortunately a side effect of blocking prostaglandins is a decrease in blood flow to the lining of the gastrointestinal tract and the kidneys.

Bute can cause gastrointestinal tract ulceration and renal failure

This decrease in blood flow damages tissues – this can result in the death of kidney cells, and the formation of ulcers throughout the gastrointestinal tract. Ulcers can cause reduction in appetite, lethargy, diarrhoea, and sometimes severe colic. If they perforate all the way through the intestine, the horse will develop peritonitis which is often fatal.

Renal failure may show similar clinical signs, and the horse will often be affected by ulcers as well. The horse will become dehydrated, which will compound the renal failure.

Despite being a prescription drug (Schedule 4), phenylbutazone is often used without the advice of a Veterinarian.

When a prescription drug is dispensed, by law it must have a label with the clinic and patient name, drug formulation and directions. The directions on this label are there for a reason – the dose and duration of treatment has been tailored to your individual horse, taking into account their age, health status, medical condition and weight. You would be shocked at the incidence of overdosing in the equine world, far too often people tell us 'it says 4ml on the label, but the horse was still lame so I gave it 15mls'.....

Phenylbutazone is generally used at a dose rate of 1.1-4.4mg/kg once to twice daily. We would rarely advise the higher dose more than once or twice as it has a greater risk of side effects. The most common dose is 2.2mg/kg twice daily for 2-4 days, then reduced to once daily dosing. If we look at an example of a 450kg horse given 2.2mg/kg, this equates to 1 gram: 5ml of the oral phenylbutazone paste or 1 sachet of granules. If the horse is given 4 times the prescribed dose, or the dose repeated after 2hrs because it isn't better yet, the analgesic effect is no greater, but the risk of toxic effects certainly is.

Some horses tolerate phenylbutazone much better than others, and the toxic threshold will be different in different horses. Young horses are much more susceptible to side effects, as are dehydrated horses.

So please don't give 20ml of paste to your horse if it is still lame after 5ml, or 5ml to your 150kg minature horse, and no more frequently than 12 hourly. Don't hesitate to contact your Veterinarian for dosing advice before administering phenylbutazone to a horse, we are quite happy to give this and would certainly rather not see the toxic effects of overdosage.

Dr Sarah Cavill

Lacerations in Horses

BEFORE

AFTER

Horses are seemingly excellent at lacerating themselves on things like gate latches, star pickets, fences etc. If there is one thing a Veterinarian loves, it is a FRESH laceration as opposed to a swollen, contracted, covered in flies, dust and faeces laceration. This is for three main reasons:

1: The golden period in cleaning wounds and suturing with the least chance of infection is the first 6hrs. An open wound in the paddock in this time frame is a contaminated wound, which can be cleaned and the horse started on antibiotic therapy with a relatively minor chance of the wound becoming infected. A laceration older than 6hrs can be assumed to be infected, which can have wound healing implications such as wound break down after suturing.

Lacerations involving synovial structures such as tendon sheaths or joints have a much better prognosis if treatment is initiated in this time frame. Seemingly innocuous cuts over the hock for example can have disastrous consequences if it has penetrated a joint and become infected

2. The key to good wound healing is cleaning and debridement before commencing repair. This can be quite time consuming, and there are no shortcuts. It can contribute significantly to the cost of a surgical procedure also. A fresh wound is very quick to clean compared to one you have to fish pieces of dirt, hair and grass seeds out of.

3. Several hours after a laceration has occurred, inflammatory mediators in the area can cause significant swelling. This can make a huge difference when surgically repairing a leg wound. There is very little spare skin and 'stretch' of skin in the legs, so swelling makes it harder to get the wound edges together. Often more subcutaneous sutures have to be placed to relieve tension on the skin edges, which is time consuming and can increase the cost of the surgery. A fresh wound has the best chance of healing quickly with primary instead of secondary intention healing (granulation tissue).

Areas like the pectoral region often do quite well without suturing, and quite large lacerations heal very quickly with minimal scarring. Distal limbs (legs) on the other hand heal much faster if the skin flap has been sutured in place. A flap of skin on a leg should be preserved at all cost, as it will significantly decrease the healing period for the horse. Skin regions that die because of lack of blood supply can always be trimmed at a later date in the healing process.

Checking your horses at least once daily can aid the timely treatment and repair of these lacerations.

Dr Sarah Cavill BVSc (Hons)

Infected leg wound several days after laceration.

The wound has swollen greatly and the skin edges have contracted away from the centre making suturing difficult to impossible.

This wound would likely have been sutured and healed well if it had been repaired in the first 6 hours.

BEFORE

AFTER