Newsletter
The Arundel Equine Hospital
Spring 2013

SEPTIC ARTHRITIS AND TENOSYNOVITIS

Joint and tendon sheath infections are an all too common occurrence in horses and ponies. They most frequently result from bacteria invading the joint space through a penetrating wound. In foals, another way infection may enter the joint is through circulating bacteria in the blood.

The most commonly infected joints in the horse are the hock, fetlock, elbow, knee, coffin and stifle joints. The digital sheath (windgall), extensor tendon sheaths (over the front of the knee and hock) and the tarsal sheath (thoroughpin) are the most common infected tendon sheaths.

Horses with an infected joint or tendon sheath tend to be very painful and are often reluctant to bear weight on the affected limb. The synovial structure and surrounding tissues are often swollen and synovial fluid may be seen emerging from the wound edges. In addition, some horses may have an elevated temperature and become dull, depressed. However, if the wound has only been recently sustained these signs may not yet have developed.

There are several ways a vet can confirm whether a joint has been penetrated. These include:

- Detection of joint fluid emerging from the wound on examination.
- Distending the potential synovial structures involved with sterile saline and seeing whether this fluid exits the wound.
- Collection and analysis of a sample of fluid taken from the joint. This is the most accurate method. Submitted samples are analysed for the number of white blood cells present, the proportion of these that are neutrophils (the white blood cells responsible for attacking bacteria), the protein level and the presence of bacteria. All these values are increased in horses suffering from an infected joint.
- X-rays and/or ultrasound scanning may occasionally be helpful.

Treatment should be started as soon as possible following the diagnosis of an infection. The aims of treatment are to:

- Eliminate the bacteria causing the infection
- Remove any foreign material such as grit, hair and dirt
- Prevent cartilage damage by removing destructive enzymes
- Control the spread of infection

Lavage (flushing) of infected structures and antibiotics are the mainstays of treatment. Lavage should ideally be carried out by arthroscopy (keyhole surgery) as not only does this technique allow for copious volumes of sterile fluid to be flushed through the structure removing bacteria, it also allows for direct visualisation of the internal structures of the joint or tendon sheath and removal of an infected tissue. Rather than surgical lavage, occasionally joints or tendon sheaths can be flushed through needles, however this is usually less successful. Antibiotics may be given intravenously or intramuscularly. To provide a greater concentration of antibiotics at the site of infection, antibiotics are instilled at the end of lavage. Other methods to achieve higher concentrations of antibiotics within the affected joint include placing antibiotic-impregnated beads within the joint and regional limb perfusion.

Horses are then closely monitored in the hospital for several days; regular assessment of soundness and repeat sampling of synovial fluid is performed. A change of antibiotics or second flush may be necessary in unresponsive cases.

The prognosis for septic arthritis in adult horses is generally very good provided the condition is recognised and treated early. It is advised that any wound near or over a joint or tendon sheath be promptly assess by your vet due to the potential seriousness of infection in these structures. The on-site laboratory and surgical facilities at the Arundel Equine Hospital allow for quick diagnosis and early, aggressive treatment, greatly improving the chance or your horse returning to its full athletic potential.

WORMS – A POTENTIAL CAUSE OF COLIC

All 4 groups of worms can potentially lead to signs of colic but how?

Large redworms

After ingestion, the larval (immature) stages of this worm migrate through the gut wall and along the arteries of the intestine to a site where the major intestinal artery branches off the aorta. The presence of larvae at this site causes inflammation which can result in bouts of spasmodic colic. In severe cases, blood clots form. These can become dislodged and block smaller vessels resulting in areas of gut being starved of oxygen. If this is prolonged, the gut wall begins to die, which is very painful for the horse and causes leakage of potentially fatal bacteria and toxins into the abdominal cavity. In this situation, if the horse is to have any chance of survival, the damaged intestine may need to be surgically removed.

Small redworms

Adult small redworms plug feed on intestinal tissue. The irritation triggered by this leads to disruption to the usual reflex movements of the gut and signs of spasmodic colic. It is thought that a third of all cases of spasmodic colic are caused by small redworm particularly in young horses.

Encysted small redworms are immature stages of the small redworms that hibernate in the gut wall over the autumn/winter period. In the later winter/early spring, if millions of these encysted larvae emerge en mass they can damage the gut wall and cause colic, diarrhoea and weight loss. This is known as 'larval cyanthostomiasis'.

Roundworms

The roundworms or ascarids usually only effect young horses. These worms are very large, upto 30cm in length, and their sheer size can easily lead to obstruction of the intestine in foals/weanlings and possible intestinal rupture. This condition may require surgery to correct and can be fatal.

Tapeworms

Several surveys have shown that tapeworms are responsible for upto two thirds of parasite infections in the horse. Adult tapeworms cluster around the narrow junction between the small intestine (ileum) and caecum. The subsequent irritation and scarring that occurs at this site leads to increased susceptibility to spasmodic colic. Extensive scarring and large numbers of tapeworm may result in the failure of food to pass from the ileum into the caecaum. This can lead to more serious problems such as intussusceptions (telescoping of one portion of bowel into an adjacent piece of bowel) or complete obstruction and consequent impaction of the ileum, which may require surgical attention.

Prevention

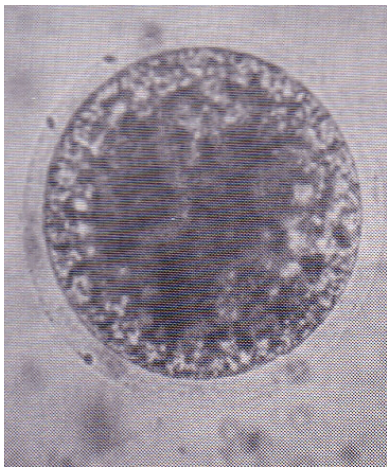
Prevention is better than cure and all parasite-associated colic is potentially avoidable. With increasing resistance to anthelmintics (wormers), a targeted approach is recommended based on the results of faecal worm egg counts (FWECs). The FWEC does not reliably detect tapeworm eggs therefore we still recommend tapeworm treatment in the spring and autumn. Alternatively, a blood sample may be taken to assess tapeworm status. Worming requirements of individual horses and premises vary greatly and not one plan is suitable for all. For example, younger horses have a much greater susceptibility for parasitism including the encysted small redworm, therefore it is advisable to use an 'all round wormer' in the spring and autumn in young stock.

Other recommended management practices include:

- Avoiding over-grazing
- Grazing similar aged horses together
- Separate horses with high FWEC from those with low burdens
- Removal of faeces from pasture at least twice weekly
- Harrowing of pasture in dry weather (to break up faeces and scatter larvae)
- Resting pasture for 6 months at a time or rotating grazing with cattle/sheep

If you would like more advice on worming or wish to find out more about our current deals on wormers please contact us on 01903883050

Artificial Insemination and Embryo Transfer



Over the last 15+ years the stud vets at Arundel have been performing artificial insemination using fresh, chilled and frozen semen from all over the world. The protocols and techniques that have been developed by our experience now result in excellent fertility rates, 96% of all mares mated per season end up in foal.

Artificial insemination has the major advantage of allowing mare owners to use semen from stallions that are based in different countries, that may have deceased or that are still in active competition. When considering purchasing semen from abroad we strongly urge clients to do so through an agent such as Elite Stallions. Such agents are there to advise on which stallions are available and more importantly they will deal with all the legislation associated with importing semen.

The fertility when using AI is often higher than it is with natural service as the methods employed are very hygienic and precise, enhancing the chances of conception in mares that may well struggle to conceive with a natural covering. This applies to the use of frozen semen as well as chilled semen. Many people are still unsure about using frozen semen as the reported fertility rates can be low. This is not the case in our hands, as long as the semen is from a reputable source and that the stallion has good fertility, then we achieve excellent in-foal rates with frozen semen. One of the main advantages to the use of frozen semen is that we are not at the mercy of the delivery companies to deliver the semen on time, we have it in our tanks ready to use 7 days a week.

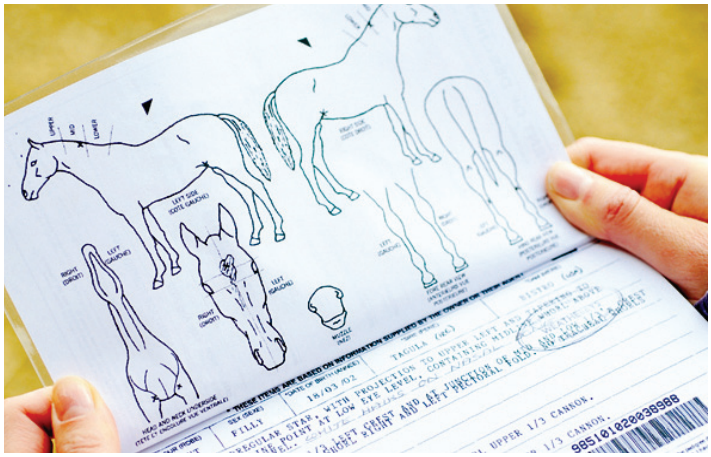
Over the last few years the stud vets have also developed successful routines for embryo transfer. This means that we can take a foal from a competing sport horse mare and place it in the uterus of a surrogate mare, allowing the donor mare to remain in work and competition. The donor mare is inseminated as normal and the surrogate mare is synchronized to her cycle. 7 or 8 days after ovulation in the donor mare the embryo is flushed out of her uterus and transferred into the surrogate or recipient mare. This process can be repeated several times in a season meaning that a good mare could potentially produce 3 or 4 foals in a season. ET can rapidly advance breeding programs to create gene pools from quality mares.

The Arundel stud vets were the first in the country to ship embryos chilled across the country, this allowed us to make use of the recipient mare herd at Twemlows Stud near Birmingham, meaning we did not have to have recipient mares in Sussex, but allowing the donor mare to remain in work with riders within our practice catchment area. We still provide this service for donor mare owners that do not possess their own recipient mares. The success rate with this technique is excellent.

As ET becomes more popular, cheaper to perform and with higher success rates, more people are sourcing their own recipient mares thus allowing us to do more direct transfer of embryos into recipient mares based locally. In 2012 we achieved a 100% success rate with transferred embryos, every embryo that was found on flush and transferred into a recipient resulted in a maintained pregnancy.

For more information on AI and ET please do not hesitate to speak to one of the stud vets at the practice.

HORSE PASSPORTS



That has been much discussion in the media recently about the finding of horse meat in processed meat products and of more concern the finding of bute in some of these products. This has brought attention back to the equine passport issue, the government are now looking at how closely the passport legislation is being adhered to and there is a risk that some of the essential medicines, such as bute, that we currently routinely use will be taken away from us if they are not satisfied.

As a consequence we would urge all horse owners to assist us in implementing the passport rules -

1. Make sure all horses and ponies have a passport and microchip if appropriate.
2. If there is no intention that a horse in your care is to go for human consumption then please fill out the section in the passport stating that it is "NOT INTENDED FOR SLAUGHTER FOR HUMAN CONSUMPTION" and sign it - next time a vet is in the yard this may need to be countersigned.
3. Please make sure passports are **readily available** for us to check before we administer medicines such as bute.
4. Any horse that has not had the relevant section signed that requires treatment with a medicine prohibited for use in meat producing horses will have to have the medicine entered into the passport.

Prescriptions

Written prescriptions are available from the practice for a fee of £13.12. These can only be provided if your horse has been examined by the prescribing vet within the last 6 months and if section A (or section IX if a new passport) of the passport, declaring the horse is not intended for human consumption is signed.

For those of you wishing to pick up medicines directly from the hospital, the practice would be grateful if you could provide at least 48 hours' notice and present your horses passport when you come to collect the drugs. This allows time for the dispensing of the drugs to be authorised by the vet and for your order to be prepared.

STAFF Announcements

Congratulations

The practice would like to pass on sincere congratulations to stud vet Simon Staempfli and his fiancée Amy on their recent engagement. We wish them all the best for their future together.

Welcome to Camilla Woodward, our new intern, and Megan Whitehouse our new nurse. Camilla will be taking over from Gemma Kirk and both Camilla and Megan will be based in the hospital working closely with Andy Crawford caring for the in patients. Those in the south of the practice may now see Gemma out on the road as she is staying at the practice to join the ambulatory team.

Congratulations to Andy Crawford who has completed the final part of his European College of Veterinary Surgery (ECVS) board exams making him a diplomate of ECVS and a European Specialist in Equine Surgery.

Goodbye to John Cole – John is finally retiring after 20 years service at the Arundel Equine Hospital. He has mainly worked in the yard as the stable manager but has always been happy to do any jobs that need to be done. He will be greatly missed and the whole team at Arundel would like to thank him for all his hard work over the years and wish him well in his retirement.