



RANDWICK EQUINE CENTRE

NEWSLETTER

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Colic 2-treatment & aftercare



A three year old colt having a pick of grass a few days after colic surgery

The signs of colic in the horse, diagnosis and most common causes were reviewed in the Summer newsletter. So what about treatment? Mild cases of colic may resolve with medical treatment alone (usually consisting of pain relief, fluid therapy and temporarily restricting feed intake). However more severe or persistent cases often require hospitalization, IV fluid therapy (through a drip)

and even surgery.

In almost all cases of colic, medical management will be tried initially and surgery only considered if there is little response or only a short-lived improvement.

Medical approach to treatment:

- Pain relief (usually flunixin) – many horses with colic will settle down in 15-30 mins following IV injection of an

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A non-weight bearing lame horse with a fractured elbow

Sudden onset severe lameness - the options

Sudden severe lameness is a major concern for any horse owner. There are many possible causes but the three most commonly implicated are: a foot abscess (pus in the foot), an infected joint or tendon sheath, or a fracture. All three will require veterinary treatment and so a vet should be called as

soon as possible.

Subsolar (foot) abscess - these result either from a penetration of the sole (e.g. nail puncture) or a weakness in the hoof wall allowing bacteria to enter. Once inside the hoof capsule, the bacteria set up an infection and because of the inability of the hoof wall to expand this is incredibly painful. Affected horses usually have an increased digital pulse and heat in the hoof.

Sudden onset severe lameness – the options

Your vet will confirm this as the source of lameness and pare away the sole in an attempt to drain the abscess and then poultice the foot to draw out any infected material. Antibiotics are not usually required for a simple foot abscess.

Septic synovial structure – Horses are very intolerant of the smallest numbers of bacteria within any synovial structure (tendon sheath or joint) and mount a massive immune response. Inflammation within the joint causes pain, as does expansion of the joint capsule. Affected animals are usually severely lame, with swelling and pain on palpation and flexion of the affected structure. Affected horses may also have an elevated temperature (over 38.5°C). Diagnosis is based on a clinical examination and taking a fluid sample from the affected structure. Laboratory tests can distinguish between normal, inflamed and infected fluid. These samples are also important to determine the best antibiotic to use to fight the infection. If a synovial structure is septic (infected with bacteria) then systemic antibiotics are essential and in most cases the structure will require flushing to remove the bacteria and inflammatory



A splint for lower limb fracture stabilisation

Wound care – the basics

One of the most common reasons why clients call a vet to visit their horse is due to trauma resulting in wounds to the skin. The most common wounds are those involving the lower leg, often the result of lacerations caused by fences or gates. Wounds in the lower limb are a particular problem due to poor wound contraction (as there is very little spare loose skin), frequent movement and a relatively poor blood supply. Delayed wound healing in the lower limb can allow the formation of excessive granulation tissue (also known as proud flesh). It is important to assess and treat all lower limb wounds quickly to encourage early healing and minimize the risk of forming excessive granulation tissue.

Wound assessment

The size, depth, amount of soft tissue involvement and extent of contamination (with dirt and other foreign matter) must be determined. These details, along with how old the wound is will determine whether sutures are required. With wounds on the distal limb, inspecting the full depth of the defect to determine whether there is any periosteal damage (damage to the surface of the bone) is essential as periosteal damage may lead to subsequent sequestrum (an infected piece of bone) formation. Delayed wound healing, a draining tract and possibly lameness are indications that a sequestrum may be present. X-rays are required for confirmation and removal of the bone fragment under general anaesthesia is the treatment of choice. It is essential that even very small wounds, particularly when near joints or tendons, are carefully examined as penetrating wounds that enter a synovial structure (joint or



chemicals. In some cases this can be performed under standing sedation but often horses will require a general anaesthetic.

Fracture – Contrary to popular belief not all limb fractures in horses require euthanasia. There are many factors that affect the management and outcome of fractures. For example an open (skin penetration) comminuted (multiple fragments) fracture of the pastern carries a very poor prognosis whilst fractures of the pedal bone can heal very well with appropriate shoeing and rest. If a fracture is suspected your vet will take x-rays to fully evaluate the injury. Some fractures are irreparable and euthanasia may be necessary on humane grounds. For other fractures surgical repair with plates, screws or wires may be an option whilst some cases can be managed by rest combined with immobilization of the affected area with a cast, splint or thick bandage. Appropriate first aid and support before transporting is essential for a favorable outcome.

X-ray of a horse with a repaired hock fracture (medial malleolus of the tibia)



tendon sheath) can lead to infection and severe lameness which can prove fatal if not treated quickly and aggressively.

Treatment of wounds

Cleaning of wounds is ideally performed using saline and gauze swabs but clean warm water with dilute povidine-iodine or chlorexidine is also suitable. Solutions should be extremely weak (1:50 dilution) as even mild solutions can irritate tissue. Gloves should be worn to avoid contamination by bacteria on human skin. The decision as to whether suturing or debridement is required should then be made. Wounds in areas such as the chest and neck may not require suturing because of excellent wound contraction and these can heal with good cosmetic appearance and minimal wound care in 2-3 weeks. The excessive use of local antibiotic solutions, ointments and powders will cause irritation to wounds and is best avoided. For small superficial wounds topical Betadine ointment can be applied daily to help keep the wound clean and free of flies. Prednoderma ointment is useful when granulation tissue is present and, combined with pressure bandages, can help to reduce excessive granulation tissue forming. Wounds on the lower limb often require careful bandaging for prolonged periods with regular bandage changes to try to minimize the poor wound healing and poor cosmetic results. Casts can be useful for some lower limb wounds as immobilization allows better healing. In rare cases skin grafting techniques may be indicated to improve the quality of healing. Tetanus prophylaxis is crucial in any horse with a wound. Antibiotics should be used if there is evidence of infection.

Colic – Part 2: Treatment & aftercare continued



Assessment of the gastrointestinal tract during colic surgery

anti-inflammatory drug. Pain relief usually lasts about 8 hours but in severe cases of colic the effect may be a lot shorter. Flunixin also has an anti-endotoxin action. Endotoxin makes up the outer cell wall of certain types of bacteria (called gram negative) and if it leaks through the gut into the blood endotoxaemia results. This can lead to compromise of the cardiovascular system and reduced gut motility.

- Sedatives, such as xylazine and detomidine, can be useful to calm horses down and provide short term pain relief. However these drugs also reduce gut motility so should not be given repeatedly in cases of colic.
- If the horse does not show signs of 'gastric reflux', fluids can be given via stomach tube to keep the horse hydrated and help soften impactions. Mineral oil is also extremely useful in cases of mild obstructions, acting as a lubricant to facilitate the passage of ingesta. Psyllium husk can be added if sand colic is suspected as it encourages expulsion of sand from the large colon.
- IV (intravenous) fluids are usually required in horses with severe abdominal pain and/or cardiovascular compromise. They help to support cardiovascular function, improve hydration and increase the volume of fluid in the gut. The fluids are given via a catheter, typically placed in the horses jugular vein.

Hospitalisation is required for prolonged administration of IV fluids.

If medical therapy is unsuccessful at providing relief of colic signs, or if examination and diagnostic tests reveal distended or displaced bowel, then surgery is likely to be required. At surgery the entire length of the gut is examined to identify the problem. Displacements can be corrected and impactions or obstructions removed. If there are necrotic (dead) parts of bowel then resection will be required, unless too extensive. The outcome following surgery depends on the underlying cause of colic. Occasionally some conditions are not amenable to treatment. Intensive nursing, antibiotics and IV fluid therapy are often required for prolonged periods following surgery. Food should be introduced slowly and long-term modification of the horse's routine is often recommended. With no complications, horses can be back in work 2 months after surgery.

10 Tips for reducing the risk of colic

1. Establish a daily routine – include feeding and exercise schedules – and stick to it.
2. Feed a high quality diet comprised primarily of roughage.
3. Avoid feeding excessive grain and energy-dense supplements. At least half the horse's energy should be supplied through hay or forage.
4. Divide daily concentrate rations into two or more smaller feeds rather than one large one to avoid overloading the horse's digestive tract. Hay is best fed ad lib.
5. Set up a regular parasite control program with the help of your vet.
6. Whenever possible, provide exercise and/or turnout on a daily basis. Change the intensity and duration of an exercise regimen gradually.
7. Provide fresh, clean water at all times.
8. Avoid putting feed on the ground, especially in sandy soils.
9. Check hay, bedding, pasture, and environment for potentially toxic substances, such as noxious weeds and other edible foreign matter.
10. Reduce stress. Horses experiencing changes in environment or workloads are at high risk of intestinal dysfunction. Pay special attention to horses when transporting them or changing their surroundings, such as at shows.

Scintigraphy – the facts

Nuclear Scintigraphy, also known as bone scanning, is an extremely useful diagnostic technique. At REC we have our own scintigraphy unit to help us diagnose a wide range of musculoskeletal problems. When bone is damaged the body repairs itself by increasing bone turnover. A radioactive marker used during scintigraphy accumulates in these areas of active bone and is measured by the gamma camera. Through special computer software this information is transformed into a picture of the horses skeleton with the areas of increased bone activity represented as 'hot spots' on the image.

Scintigraphy is most commonly used as part of a lameness investigation, being particularly useful in areas poorly penetrated by x-rays due to thick soft tissue, for example, the pelvis. It should only be performed after a thorough clinical examination and sometimes after other diagnostic procedures, for example x-ray and ultrasound, have failed to identify the cause. Scintigraphy is very useful at detecting injuries at an early stage. In particular it is a sensitive technique for identifying stress fractures which are often not visible on x-ray, especially in the first few weeks following injury. Stress fractures are a common cause of lameness in the Thoroughbred racehorse, most commonly occurring in the humerus, tibia and pelvis. Early diagnosis helps to reduce mortality by preventing them from developing into catastrophic fractures. Scintigraphy is also useful for monitoring the healing of stress fractures, which is important in deciding when

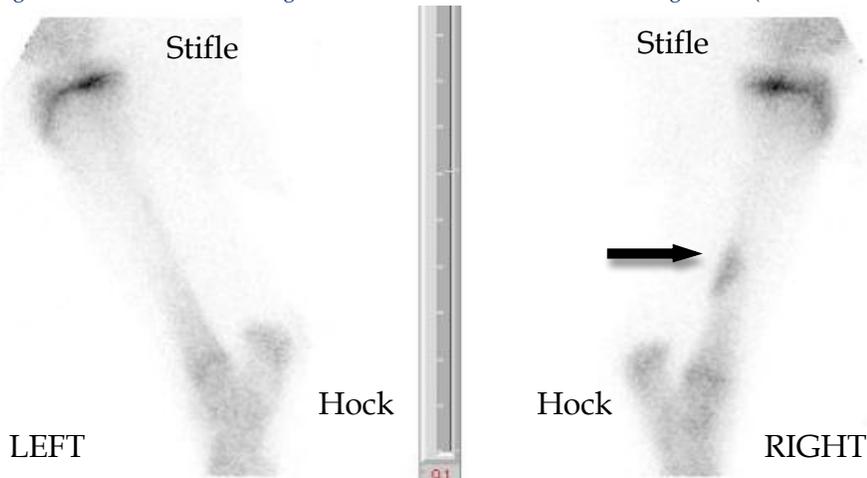
horses can return to work or training.

In the sport and general horse population scintigraphy can help diagnose lesions within the foot, sacroiliac regions, back and neck, and multiple limb lameness. It also provides valuable information for dental disorders, and occasionally respiratory and other medical problems.

The procedure involves admitting the horse the previous day to allow for assessment and early injection. The horse is walked or lunged to maintain good blood flow to all the limbs before being injected with a radioactive "marker" (technetium 99). Once injected the horse is considered mildly radioactive and is kept in a specially reserved stable. We wait approximately 2 hours to achieve good distribution of the marker into the bones before walking the horse into the scintigraphy room. Occasionally immediate scans can be performed to examine soft tissue structures. Horses are sedated for the scan. Depending on how big the area to be scanned is and how still the horse remains (movement causes the images to be 'blurred') it takes between 1 and 6 hours.

The procedure is non-invasive with minimal risk to both the horse and personnel, however regulations state the horse cannot be released from the hospital until radiation is significantly reduced (24 hours after the initial injection). Sometimes your horse may need to stay on slightly longer for a follow up examination or radiographs that your vet might deem necessary in light of the results.

Images from a bone scan showing a 'stress fracture' in the middle of the right tibia (black arrow)



REC NEWS



New interns join the team

Three new interns have recently started at REC. Dr Ilona Bayliss (left) and Dr Katie Hickey (right) are 2 more recruits from England, while Dr Liz Dryburgh (middle) joins us from the USA. Along with ex-jockey Ramon, they are doing a great job of running the hospital as well as helping out with x-rays and treatments at the racetrack. Dr Victoria Locke finished her internship with us in February and has now joined the practice as an associate.



Saturday Service

Dr Emetia Cull is now working every Saturday to provide a regular service to our pleasure horse clients who struggle to squeeze in a vet visit during the week. Appointments need to be made in advance. Please call the practice to make a booking.

Editor: Dr Rachel Salz