

AUTUMN/WINTER
EDITION 2017

XLVets Equine - Better Together

Equine

MATTERS

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Inside this issue:

Equine heart disease

Symptoms and diagnosis

Coughs & sniffles

A review of respiratory disease





AUTUMN/WINTER EDITION

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Equine Matters is published by:
XLVet UK Ltd, Carlisle House
Townhead Road, Dalston
Carlisle CA5 7JF
Tel: (01228) 711788

*This publication is supplied free of charge to equine clients of XLVets member practices.

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FROM THE EDITOR

Welcome to the 'Autumn/Winter' edition of Equine Matters...

...produced by XLVets Equine practices.

With the dark nights drawing in and storms Ophelia and Brian to keep us company, it's already feeling rather like winter is here! This issue has a mix of topics and something to appeal to everyone.

Winter often brings coughs and sneezes and in this issue Colin Mitchell takes us through some of the different conditions that can affect your horse's respiratory system. Older horses may also find winter a more difficult time so hopefully some information on their care from Kate Chessman will prove useful over the coming months and beyond.

Lastly, I'd also like to welcome our guest editor, Sally Hodgson from Hook Norton Veterinary Group.



Susan Donaldson

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CONTENTS

- | | |
|--|--|
| <p>03 Assessment of heart disease in horses - Dr Keesjan Cornelisse from Calweton Equine explains the symptoms and diagnosis of common conditions of the equine heart.</p> <p>06 Donkey health - not just a small horse!
Rachel Pretswell, Northvet Veterinary Group, provides some useful advice on keeping your donkey healthy.</p> <p>09 How can I keep infectious diseases out of my yard?
Dr Kieran O'Brien from Penbode Equine offers advice on how to control some of the diseases that new arrivals can bring into your yard.</p> <p>11 Common causes of respiratory disease and nasal discharge - Colin Mitchell of Scott Mitchell & Associates explains the causes, symptoms, diagnosis and effects of equine respiratory disease.</p> | <p>13 What is sacro-iliac disease?
David Rutherford, Fellowes Farm Equine, provides insight into a disease that is can be difficult to diagnose and treat.</p> <p>16 Care of the older horse
Kate Chessman from Midshire Farm & Equine highlights some key health aspects to be considered as your horse grows older.</p> <p>19 Acupuncture in horses
Dr Stuart Thorne of Fellowes Farm Equine explains how acupuncture works and some of its uses.</p> <p>20 Happy ending - Seeing clearly
Kyle Tindall-Read, Durham Equine Practice, describes the case of the donkey with the sore eye.</p> |
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Assessment of heart disease in horses

Heart disease in horses is uncommon and the causes are numerous. The clinical signs can be non-existent, or can vary from a mild cough to tiring easily, collapse or even sudden death.

Besides a good clinical examination, a variety of further diagnostic tests are available including ultrasonography to look at the structure and valves of the heart, and electrocardiogram (ECG) to assess the electrical activity in the heart which stimulates the heart muscle to contract and thereby the heart to beat. Any underlying disease should be treated accordingly while the heart disease is managed.

Horses may be born with a heart problem (congenital) or may acquire one later in life (acquired). The structure of the heart may be affected or it may be the ability of the heart to pump which is the problem. In some individuals, both of these may be involved. Like other species, congenital structural defects may present in various forms with ventricular septal defects (effectively a 'hole in the heart') being one of the more common problems.

Acquired causes include ageing changes affecting the different components of the valves of the heart resulting in the valves themselves not working effectively and becoming leaky.

Other less common causes of heart disease in horses include damage to the heart muscle (cardiomyopathy) from viral infection, damage to the valves from large amounts of bacteria in the bloodstream, consumption of toxins, and occasionally rupture of one of the heart's internal structures. Imbalances of electrolyte concentrations in the blood may contribute to the heart's rhythm being affected. Clinical signs can be varied from a mild cough to exercise intolerance, collapse or sudden death. Clinical signs may also be non-existent when horses are not strenuously exercised.

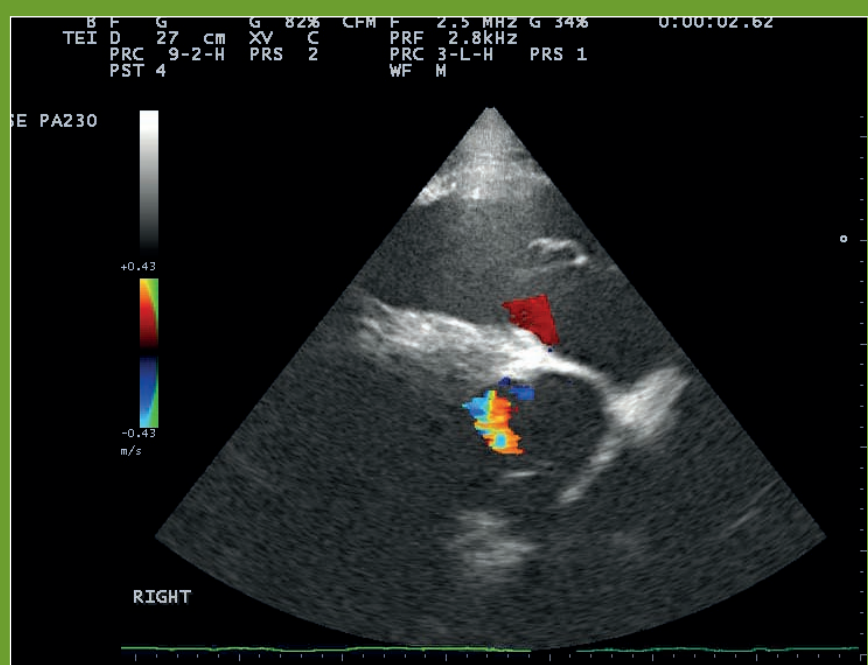


Figure 1. Ultrasound is used to image the size of the heart and its chambers, and assess the competency of valves

As owners, perhaps the most common scenario is that of a heart murmur or abnormal heart rhythm being heard by your vet when the horse is examined either at a pre-purchase examination or routine vaccination. A heart murmur is an abnormal sound produced by the heart due to turbulent bloodflow. In some cases this is normal (termed a physiological or flow murmur) or may be the result of a leaky heart valve or a hole in the heart, allowing some blood to move in a different direction to the rest within the heart. Few murmurs will have a significant effect on performance or be life-threatening, but it is very important that they are adequately investigated to ensure that this is not the case, and that the horse is safe to perform its job. The horse has a large reserve

for cardiac function and so may never show signs of a problem.

Heart murmurs

The first part of assessing a murmur is by listening (auscultating) carefully with a stethoscope. Murmurs are graded from Grade 1 to 5 with 1 being the quietest and 5 the loudest. In general, the louder the murmur, the more turbulent blood flow is present and potentially, the more significant the murmur is likely to be, although this is not always the case. Whether the murmur is louder on the right or left side of the chest and how far back or far forward it can be heard may give an indication of which heart structure is involved. The heart rate and rhythm are also assessed at this point.

The next stage of assessment involves an ultrasound of the heart itself (echocardiography) (Figure 1). This should allow diagnosis of the specific structure involved in the murmur and how much abnormal flow of blood is present. The size of the heart chambers is also able to be assessed: if there is significant backflow of blood into a chamber, that chamber may become stretched over time leading to the efficiency of the heart being reduced. An electrocardiogram (ECG) may be performed at rest and/or at exercise to look at the heart's rate and rhythm (Figure 2 & Figure 3). Putting all this information together, the significance of the murmur can be ascertained.

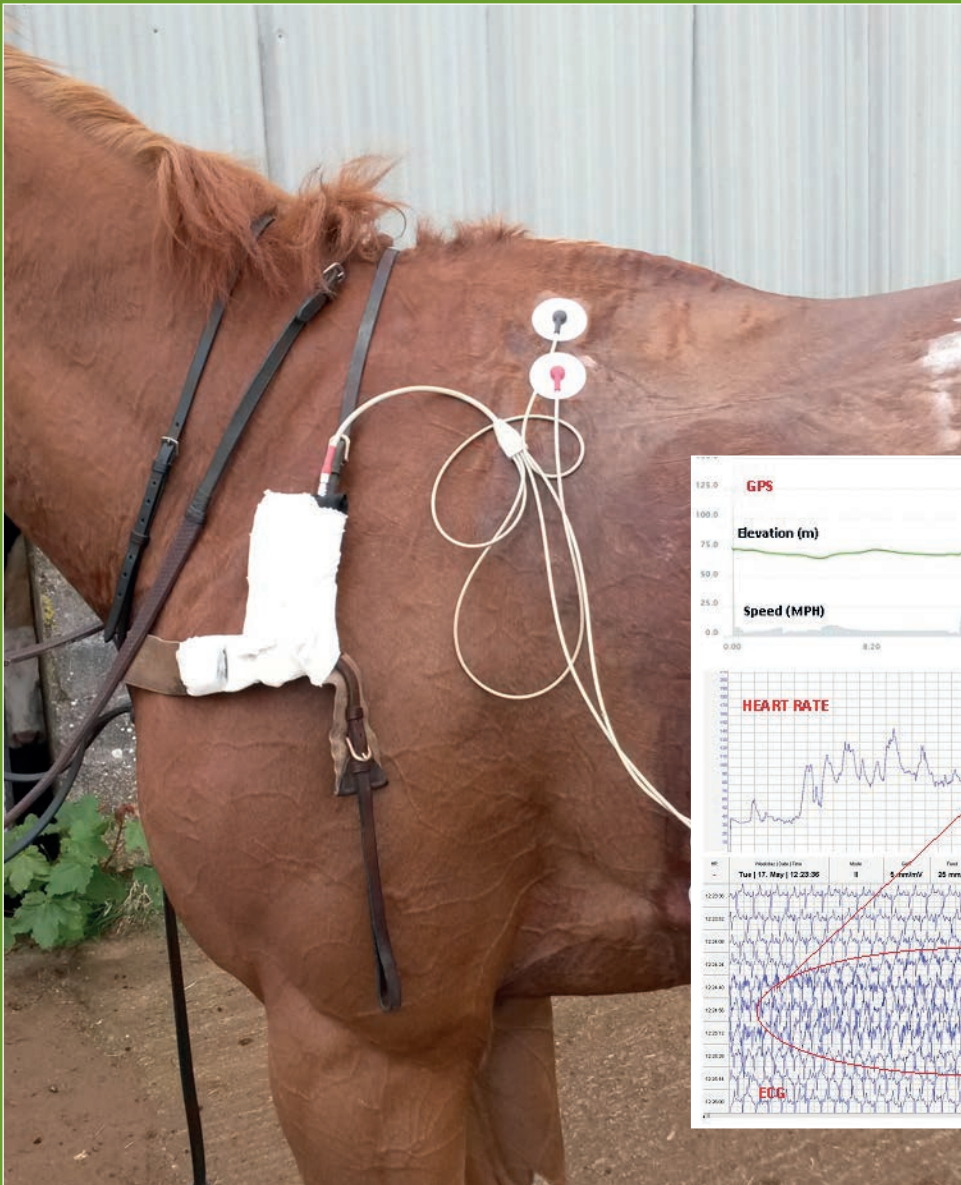


Figure 2. ECG

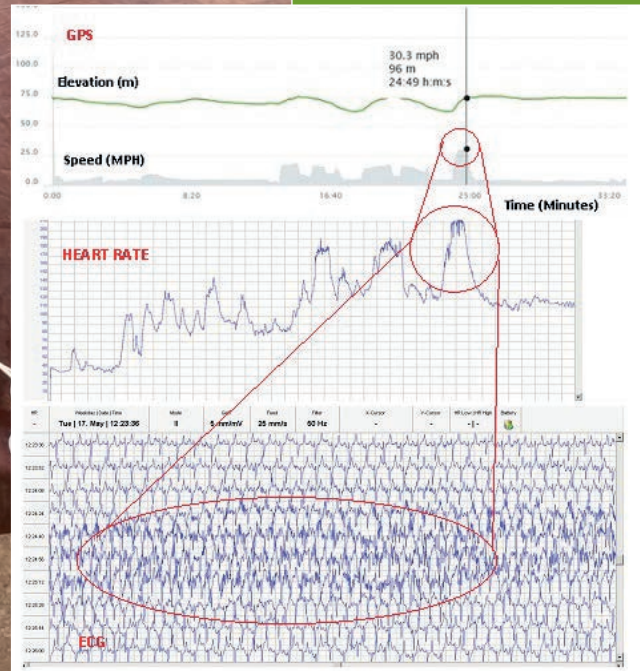


Figure 3 – Trace from ECG

Some other factors may be important at this point such as what level of work the horse is intended to be used for. Often, even in murmurs deemed unlikely to cause a problem, repeat examinations at six monthly intervals may be required to ensure that there is no rapid deterioration.

Rhythm abnormalities

A common finding in fit horses is a heart rhythm known as second degree atrio-ventricular block. When listening to the heart, this is heard as a regularly dropped beat, and is generally of no significance. The most common abnormal rhythm associated with a problem is atrial fibrillation (AF). This is heard as an 'irregularly irregular', chaotic-sounding heartbeat. This abnormal rhythm may be either present all the time or may come and go (paroxysmal AF).

The heart is stimulated to contract by electrical impulses being sent through the heart muscle in a coordinated manner and in AF, the electrical impulses become incoordinated and muscles of the chambers of the heart contract at different times, meaning the pumping of blood both through and from the heart becomes inefficient. In most cases, there is no underlying problem with the heart, although sometimes

AF can be secondary to valve problems which have allowed the heart chambers to become stretched. Often no outward clinical signs are seen although horses in hard work may show slower recovery times and occasionally may suffer from bilateral nosebleeds after strenuous exercise (Figure 4). Confirmation of the diagnosis is made by ECG at rest and/or at exercise.

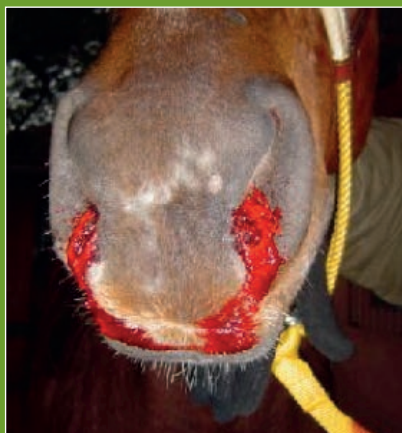


Figure 4. Bilateral nosebleeds after strenuous exercise may be associated with atrial fibrillation

Treatment of AF is either by repeated administration by stomach tube of quinidine sulphate (Figure 5) or electrical cardioversion. Quinidine sulphate was traditionally used but does carry a number of possible side effects, including causing potentially life-threatening rhythm abnormalities. Careful monitoring of the heart rhythm by ECG throughout the treatment which may last more than 24 hours is required. More recently, electrical cardioversion has become available at a few equine hospitals in the UK. This involves applying an electrical shock to the horse's heart whilst it is anaesthetised.

Prior to deciding on treatment, the horse should have a cardiac ultrasound in addition to the ECG, and it is important to consider whether in fact treatment is required as many horses in lower level work will cope with AF, and clearly treatment options are not without risk. In addition, some horses who are treated and regain a normal heart rhythm may still revert to AF at some point.

Regardless of the disease or the condition, your vet's stethoscope is a vital piece of equipment for detecting potential problems. Regular check-ups will help ensure early diagnosis and prompt treatment, when necessary.



Figure 5. Conversion of atrial fibrillation with quinidine sulphate by indwelling stomach tube



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Donkey health; not just a small horse!

Donkeys make great versatile pets, however there is a misconception that they are small horses with big ears! This is not the case: Donkeys differ anatomically, behaviourally and emotionally from horses and should be treated as such. That being said, there are some parallels that can be drawn when it comes to care of the donkey whilst taking into consideration some very important variations.

Diet and environment

Donkeys evolved in dry, desert environments eating a diet of mostly forage. This means that for domesticated donkeys in the UK, getting their diet and environment right can

be tricky. Their digestive systems are extremely efficient and require fewer calories than even an equivalent sized pony. For this reason it is important to carefully consider your donkey's diet and feed your animal on a high fibre, low sugar diet.



Figure 1. Good quality barley straw can be a part of a high fibre, low sugar diet

Most animals can be maintained on a diet of good quality barley straw which can also serve as bedding (Figure 1). This primary diet can be topped up with grazing or haylage. Each donkey should be allowed 0.5 acres of suitable grazing and strip grazing should be considered as access to unrestricted grazing can result in obesity. Access to shelter should be available at all times as donkeys' coats aren't as waterproof as horses'. Vitamins and minerals can be provided in the form of a donkey balancer or equine specific non-molassed block. Most importantly donkeys should never be fed cereal grains.

The donkey's foot is also adapted to an arid climate. The foot differs from the horse as it is more upright or "boxy" (Figure 2) and the hoof itself is much more elastic and absorbs more moisture from the environment. When we keep donkeys in a lush pasture environment we can make the hoof soft and crumbly, causing a predisposition to issues such as abscesses, thrush and seedy toe. It is advisable to ensure your animal always has access to an area of dry ground when turned out. Just like horses, it is important to have your donkey's feet trimmed by a farrier every 6-10 weeks and a farrier with some experience of working with donkeys would be very useful.

Routine health care

For routine care, donkeys require a lot of the same general healthcare that horses and ponies benefit from. They are susceptible to many of the same diseases and therefore should be vaccinated against both equine influenza and tetanus. Donkeys can suffer from dental issues, however problems may be more difficult to pick up due to the stoic nature of these animals. For this reason they should have their teeth checked regularly (Figure 3).

Donkeys are also susceptible to many of the same intestinal parasites and for this reason a year round worming regime should be discussed with your vet. This is particularly important if your donkey will be co-grazing with horses as they are an asymptomatic carrier of the lungworm *Dictyocaulus Arnfieldi* which can cause respiratory disease in horses.

Recognising an ill donkey

One of the biggest issues for donkey owners and vets alike is their stoical nature. Donkeys may show little if any sign that they are in pain or unwell making it extremely important to be able to pick up on subtle changes in behaviour. Very often the only sign that a donkey is ill is a depressed demeanour and a decreased appetite, however even these signs can be difficult to pick up in such a naturally quiet animal. At this point it is also important to note that donkeys are extremely social animals (Figure 4), forming strong emotional



Figure 2. Donkeys' hooves absorb more moisture making them prone to certain foot problems



Figure 3. Dental checks are important



Figure 4. Donkeys are social animals so should have a companion

bonds with their companions, therefore a donkey may display signs of dullness due to separation from a friend. This said, if he is not himself it is always better to have your donkey checked over by a vet rather than waiting to see if he improves on his own.

Hyperlipaemia

One reason for taking your dull or depressed donkey seriously is the threat of the not uncommon condition hyperlipaemia. This condition occurs when the donkey is in a negative energy balance i.e. the energy the donkey is expending outweighs its intake.

When this happens the body mobilises fat molecules, sending them to the liver to be converted to glucose, making up the energy difference. Issues occur when the body continues to do this after the negative energy balance has been addressed, causing the blood to fill with fat molecules which in turn leads to kidney and liver damage, and eventually failure.

As discussed previously, even when your donkey is very ill you may only see very subtle signs, so it is important to call your vet who will thoroughly examine them and may take a blood sample to look for this

potentially life threatening condition (Figure 5). It is often possible to diagnose hyperlipaemia just by looking at a blood sample, as the fat molecules in the blood cause the sample to have a cloudy, almost opaque appearance.

Risk factors for hyperlipaemia include:

- **Obesity:** If your donkey is overweight the increased fat reserves also increase your donkey's risk of hyperlipaemia.
- **Age and sex:** Older jennys are most at risk.
- **Pregnancy/lactation:** Increased energy requirements during late pregnancy or early lactation can easily tip a jenny into a negative energy balance.
- **Concurrent illness/stress:** For example, dental issues, a heavy worm burden or colic. Emotional stressors such as being separated from a companion can also be a trigger.

Treatment of hyperlipaemia is intensive and involves treating any underlying causes, symptomatic therapies and nutritional support to try to maintain the animal in a positive

energy balance. Unfortunately even with intensive therapy the prognosis for hyperlipaemia is extremely guarded.

Colic

Like horses, donkeys can also suffer from colic, however the clinical signs and causes can vary. If you suspect colic, your vet will make an assessment based on your donkey's clinical signs including heart rate and respiratory rate which may be raised from their normal ranges of 31-53 beats per minute and 13-31 breaths per minute respectively. Impactions are one of the most common causes of colic in donkeys and for this reason it is important to introduce any dietary changes to your donkey slowly over a 4-6 week period. Treatment is similar to that in horses and involves symptomatic treatment with fluid therapy and pain relief.

While there are some important points to remember when caring for your donkey, most live long and happy lives with some reaching into their 40s! If you have any queries regarding care for your animal don't hesitate to contact your vet.



Figure 5. Taking a blood sample helps confirm diagnosis



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How can I keep infectious diseases out of my yard?

New arrivals can bring unwelcome presents with them – infectious diseases, principally ringworm and respiratory infections. Here are some simple tips to help you keep these problems out.

The riskiest animals are those that come from high-throughput yards (such as dealers' and hauliers' premises) or that have spent time where horses congregate (for example at shows or auction sales). Although horses moving from small private yards are theoretically less risky, if they transit through hauliers' premises or are part of a mixed load on a lorry, that may not be the case. For example, recent imports from Ireland often develop a respiratory infection 1-2 weeks after arrival.

Let's look at these diseases in turn:

Ringworm

Almost always the first case in an outbreak is a recent arrival that has picked up the

infection on the premises of origin. Because the spores are very long-lived, the infection may be endemic on some yards. Any new arrival that develops the typical raised areas of skin (usually on the head, neck, saddle and girth regions) which quickly lose the hair and become flaky, must be regarded as a suspect case and be promptly treated, with strict hygiene measures imposed.

If you want to be extra-careful, when a new horse arrives you can remove the head collar and any rugs and soak them in a disinfectant such as Virkon, and give the horse a single all-over treatment with an anti-fungal wash such as Imaverol - and don't forget the head.



Figure 1. Ringworm

Strangles

This can be a tricky infection to exclude without making a special effort. The disease is most commonly introduced by a carrier (one in ten recovered cases becomes a carrier) or by a horse that is incubating the disease following recent exposure. Recovered cases have strangles antibodies in their bloodstream, so you can insist on a blood test before arrival. If positive, you have the option of either refusing to accept the horse without further confirmatory testing being done, or to isolate the horse on arrival and have further tests done then.

If there is no blood testing before arrival (this can sometimes be hard to arrange), isolate the horse and after two weeks have it blood sampled. The two week wait is in case the horse was infected just before it arrived. If the blood is negative, wait a further week for any signs to appear, and if none, the horse can come out of isolation. If positive, further tests must be carried out to check if the horse is a carrier.

Other respiratory diseases

These include equine influenza. 'Flu vaccination will help to protect your own

horses, assuming ALL horses on your premises are done, and the boosters are kept up to date. Any horse showing respiratory signs (cough, nasal discharge) on arrival must either be rejected or placed in strict isolation. The incubation period for 'flu is short (up to 3 days) but for other respiratory infections it can be up to three weeks. So in general, isolating all new arrivals for 3-4 weeks is good practice. If they develop respiratory signs during this period their isolation period must be extended until they are no longer deemed to be infectious.

What do we mean by 'isolation'?

Separation anxiety is a big problem when it comes to isolating most horses, so if possible you need to ensure they still have visual contact with others. The best place is in a field where they are separated from other horses by a gap of at least 10 metres (preferably 25 metres). If they can see other horses, most will settle and graze. They should be attended to last in the yard regime, and have separate feed bowls etc. If possible separate personnel should look after them but if not, separate overalls and gloves should be worn. Great care must be taken to avoid

ANY nose-to-nose contact with other horses, for example when they are being moved.

If splitting a paddock is impractical, some sort of separation in the stable yard must be arranged, although it is never as good as a completely separate stable block with its own airspace. In a barn situation the horse should be stabled at the end of the aisle, and the next door stable left empty. It should be possible to remove the isolated horse without walking past the others. Turn-out times should be alternated and the horses kept strictly away from each other when changing over. The isolated horse should have its own buckets, rugs etc and ideally be cared for by a person who has no contact with the other horses. The new horse should have its temperature taken at least once a day, and be carefully monitored for any signs of illness (raised temperature, off colour, reduced appetite, respiratory signs or loose faeces). If signs appear, more stringent quarantine arrangements can be imposed and veterinary advice must be immediately sought.



Isolating all new arrivals for 3-4 weeks is good practice but consider how to limit separation anxiety



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Common causes of respiratory disease and nasal discharge

After musculoskeletal disease, respiratory disease is possibly the next most common cause of poor performance in horses. Respiratory disease has many causes and can depend on complex interactions between:

1. The horse (age, immune status, genetic predisposition)
2. The disease (viruses, bacteria and their ability to cause disease)
3. The environment (exercise, mixing, air hygiene)

Much is known about the causes, prevention and treatment of respiratory disease and attention is increasingly focussed on air quality and its association with disease.

The signs of respiratory disease can be mild or more severe, but usually include:-

- Reduced athletic performance
- Increased respiratory rate
- Increased respiratory effort
- Nasal discharge (**Figure 1**)
- Cough
- Enlarged lymph nodes under the jaws
- High temperature / off colour / reduced appetite

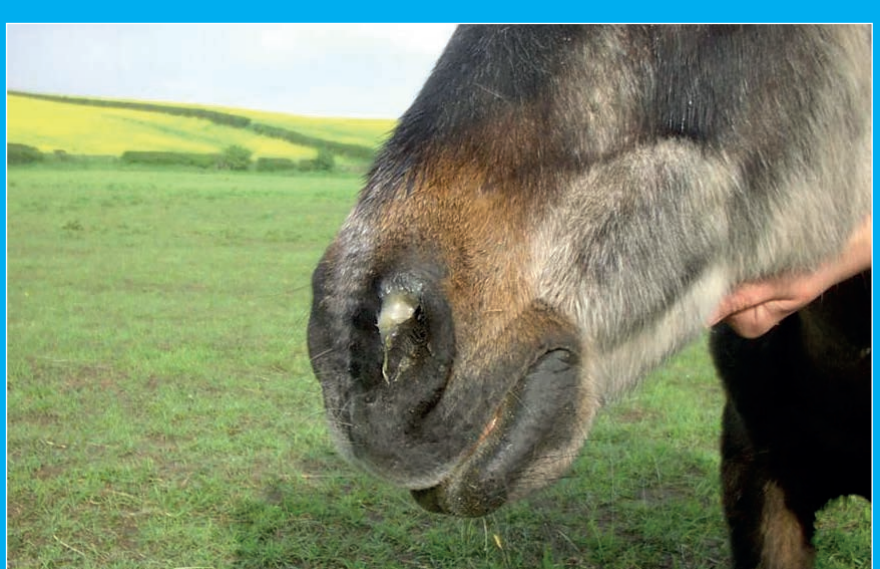


Figure 1. Nasal discharge

Your vet will need to perform a clinical examination and, in many cases, further tests such as blood samples or endoscopic examination will be needed to confirm the presence and nature of the respiratory disease. Endoscopic examination involves the passage of a flexible camera (Figure 2) passed up the nostrils, across the back of the throat and then down into the windpipe to the entrance of the lungs.

The area from the larynx (voicebox) to the nostrils is known as the upper respiratory tract (URT), while the windpipe and lungs are known as the lower respiratory tract (LRT).

The endoscopic view of the larynx is shown in (Figure 3).



Figure 2. An endoscopic flexible camera



Figure 3. An endoscopic view of larynx

Along this 'journey', the vet is examining the respiratory tract for swellings, presence of mucus, lymph node enlargement and foreign bodies. In many cases, horses will tolerate the examination very well, since their respiratory tract is not as sensitive as ours. Sedation is usually but not always required. Other useful adjuncts to endoscopy, often carried out at the same time, are either a tracheal wash (TVW), or a broncho-alveolar lavage (BAL). There are pros and cons to each technique but the principles are the same - a sample of mucus and cells from the lungs are taken and examined microscopically. This can be very useful in confirming a diagnosis of lower respiratory disease, particularly when the only presenting sign may be poor athletic performance.

Figure 4 shows a BAL sample of fluid retrieved from the lungs - note the 'frothy' appearance in the syringe.



Figure 4. A sample of mucus and cells taken from the lungs

Historically, URT disease was thought to be very common, but the tide of opinion seems to be shifting towards LRT disease being more significant and possibly, in some cases, a cause of suspected URT disease.

Broadly speaking, LRT falls into two main categories, although some overlap is possible:

1. Infectious respiratory disease
2. Inflammatory airway disease

The infectious agents that can cause disease include:-

- Viruses - influenza, herpes virus and rhinovirus.
- Bacteria - *Streptococcus zooepidemicus* / *pneumoniae* / *equi* (Strangles) and *Mycoplasma*

All of these infections will cause signs of respiratory disease which, although not usually serious, can disrupt training and exercise regimens. They can also trigger an episode of Inflammatory Airway Disease in the lungs - a condition which can have a very protracted recovery and, in some cases, remove a horse from competitive work for the rest of the season.

Influenza virus causes an explosive outbreak of respiratory disease due to its very contagious properties. Herpes virus is slower to spread and can cause both respiratory disease outbreaks and disease in individuals. Herpes virus can also lead to abortion in pregnant mares, illness in foals and occasionally a form of neurological disease that causes paralysis.

Vaccinations against influenza and herpes are used widely and are safe and effective. These signs can be reduced and the spread of the disease halted by use of vaccination.

Many competition horses require evidence of up to date vaccinations against influenza to enter competitions and shows. These requirements may differ depending on the show and so it is always best to check in advance.

Inflammatory airway disease (IAD) is a syndrome of lower airway inflammation, signs of which may include cough, nasal discharge, reduced high speed performance and protracted recovery after exercise. IAD is frequently without signs - coughing is only present in 1 in 3 horses.

High speed exercise, younger individuals, mixing of horses, transport, cold air temperature, high stable dust concentration, genetic predisposition and airway hyper-sensitivity have all been implicated in IAD.

Intense exercise also has a number of effects on the airways:-

1. The increased movement of air increases particulate contamination of the airways
2. Cold ambient conditions can result in micro-damage to the lining of the airways, resulting in compromise of the lung defence mechanisms

Research has shown that after a respiratory infection it can take the lungs at least 8 weeks to fully recover. This period represents a time of potential hypersensitivity and continuing IAD.

Stabling horses will stimulate airway inflammation. Both the composition and concentration of stable dust are heavily influenced by the nature of feed, bedding, ventilation and management practices. Innocuous components can become significant in the face of airway hypersensitivity due to pre-existing inflammation. Many of the traditional buildings used for stables in the UK are less than ideal for horses - this is because they usually lack enough windows for air inlets and outlets. Horses stabled in environmental conditions predisposing to induce IAD are more likely to suffer IAD and take longer to recover.

Most professional horse keepers would agree that a haylage based diet with a regular change of bedding optimises lung health. The choice of bedding depends on many factors, but generally includes one, or a combination of:-

- Shredded paper
- Rubber matting
- Sand
- Shavings / sawdust (MUST be dust-extracted)
- Wood chip / wood bark products

Finally, the ideal stable has windows, above horse height, at the front and back of the stable as well as a vented roof.



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What is sacro-iliac disease?

In horses, the part of the spine which runs through the rump area is called the sacrum. It runs inside the pelvis and is connected to the ilium (a part of the pelvis) on either side. This connection is called the sacro-iliac region, and represents a separate area on each side of the body (**Figure 1a**). The sacro-iliac area is not a joint; instead the sacrum and ilium are bonded together with tight connective tissue, which in a sound horse is pretty much immobile. This allows a horse's weight and the forces required for movement to be transferred back and forth between the backbone and the pelvis efficiently and without any discomfort.

In sacro-iliac disease this tight bond between sacrum and one or both sides of the ilium has become weakened and may be a little loose. As a horse moves, and weight has to be transferred from the legs to the body, the weakness in the bond allows a small amount of movement to occur between the sacrum

and the ilium. This causes inflammation and pain. As time passes, scar tissue will build up around the sacro-iliac area and new bone can form on the bony surfaces, making the union between the two bones weaker still, and thereby exacerbating the problem.



Figure 1a. View of the skeleton of a horse when standing behind the tail. The sacrum (yellow arrow) can be seen sitting within the ilium (red arrow) on each side of the pelvis. The connection between the sacrum and the ilia are the sacro-iliac areas (green arrow).



Figure 1b. The path taken by a needle for injection of medicines into the sacro-iliac region.

How is it caused?

Sacro-iliac disease can be a primary problem, or can be secondary to other orthopaedic issues. Primary damage to the sacro-iliac area may be the result of a specific traumatic incident such as a fall or trailer accident. On such occasions there can be a sudden significant strain to the sacro-iliac area caused by the impact, and the tight fibres bonding the sacrum to the ilium can be torn. As an example, if a horse rears up and lands hard on its backside, all of its weight will impact on the back of the pelvis and create a massive shunting force upwards through the body. This may cause a strain in the sacro-iliac region. Whether one side or both sides of the sacro-iliac region are affected will depend on the nature of the incident.

Sacro-iliac disease can also be a repetitive strain injury, usually in conjunction with another underlying problem. The most common underlying problems include proximal suspensory disease in the hind limbs, hock joint arthritis (bone spavin) and kissing spines, but any cause of prolonged lameness could be responsible. Due to pain, these issues tend to cause long-term asymmetric movement within the body and in particular the pelvis, such that the forces acting on the sacro-iliac area are abnormal. Over time this results in a gradual weakening of the fibres connecting the sacrum and ilium so that their bond is loosened.

What signs will a horse show?

Often there are minimal visible signs of sacro-iliac problems. In some horses asymmetry of the pelvis is present - this is best viewed from behind with the horse standing square. The gluteal muscles may be different sizes, or more commonly the bony prominences at the top of the pelvis (the tuber sacrum) are not level (called 'Hunter's bumps') (Figure 2). Sometimes horses show pain when pressure is applied to the back or pelvis, and there may be tension in the muscles.

The degree of lameness varies. Sometimes after a specific recent trauma it is obvious and associated with one limb, but more often only a subtle loss of performance across both hind limbs is noticed. There is a lack of drive from behind such that the rider feels that the horse is pulling from the forelimbs rather than pushing forward with the hinds. Elevation and stride length in the hind legs are often decreased, and horses commonly disunite in canter. There is likely to be a mild worsening of lameness after hind limb flexion.



Figure 2. A horse's gluteal muscles and pelvis viewed from behind. There is clear asymmetry in the pelvis between the two tuber sacrum with the left being higher. This is often referred to as 'Hunter's Bumps'.



Figure 3. A horse's pelvis and sacro-iliac area when viewed from above

How is it diagnosed?

Discussion of the problems and evaluation of lameness can give a clue of sacro-iliac disease, but there are many other problems that can present in similar ways. If a clear lameness is visible, it is possible to numb the sacro-iliac areas and observe for an improvement in gait, but this can be unreliable. Nuclear scintigraphy (bone scanning) is the main way to diagnose the problem with clear abnormalities being seen in the sacro-iliac regions (Figure 4). Ultrasonography of the sacro-iliac regions via the rectum can be used as an additional diagnostic tool, but again can be unreliable.

What treatments are available?

The aim of treatment is to allow the sacrum and the ilium to regain their strong bond together - often taking many months. As such, time and rest with controlled non-ridden exercise including lunging, long reining and hand walking are important. Working closely with a qualified equine physiotherapist, specific stretches, reversing movements and pole work are important to improve flexibility and core strength while allowing the sacro-iliac areas to heal.

Veterinary treatments include cortisone injections with long needles down into the sacro-iliac regions (Figure 1b), shock wave therapy and in feed anti-inflammatories. The cortisone injections are anti-inflammatory and will give pain relief; shock wave therapy also gives pain relief, but in addition aims to promote the growth of new blood vessels into the damaged areas, therefore improving the healing process.

It is also critically important to address any other underlying issues such as hock arthritis or suspensory ligament injury.

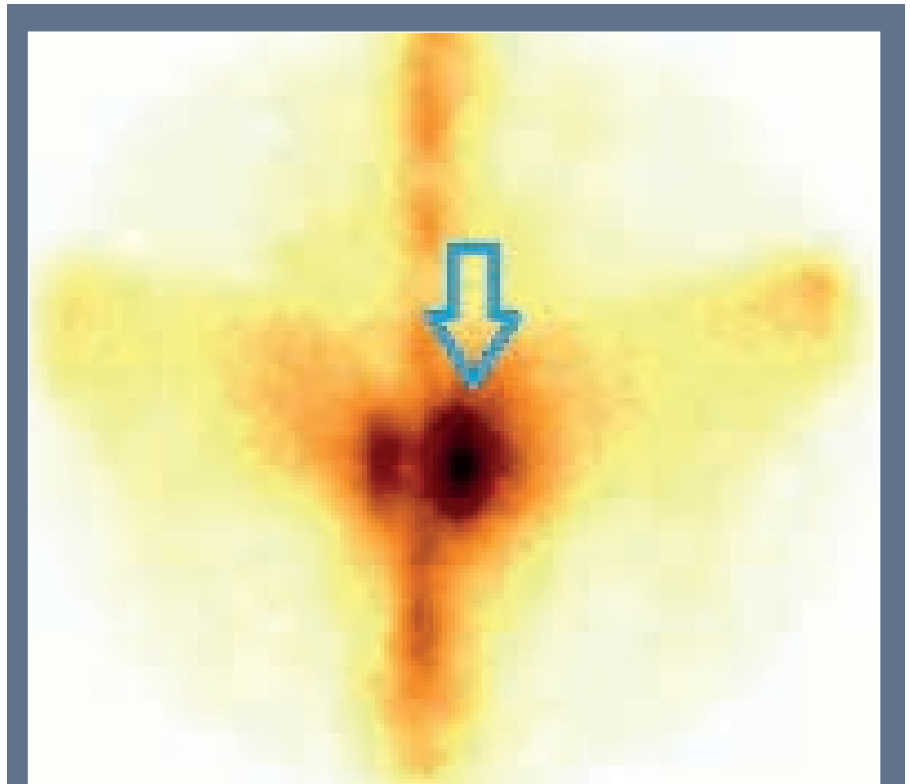


Figure 4. Nuclear scintigraphy (bone scan) image of a horse's pelvis from above. There is a clear asymmetry of the image with an abnormality of the right sacro-iliac region (blue arrow).

What is the prognosis?

Unfortunately prognosis is not great. When there is another underlying injury which has caused the sacro-iliac disease, the overall prognosis is often closely associated with the prognosis for the causal condition. For instance, kissing spines can be corrected surgically thereby, hopefully, removing this

inciting cause, whereas proximal suspensory disease is much harder to control. Even when there is no underlying cause, or the cause can be removed, only about half of horses make a full recovery.





Kate Chessman BVM&S MRCVS,
Midshire Farm and Equine

Care of the older horse

Older horses are becoming more common in the equine community and are often much loved, long-standing members of the family. But what is a geriatric horse? Currently horses in their late twenties and thirties are considered to be geriatric, and these older horses generally require a more closely monitored healthcare regime compared with their younger counterparts.

Five areas of geriatric healthcare that usually require closer attention are dentition, hoof care, worming, nutrition, and blood screening for disease.



Veterinary surgeon	Kate Chessman
XLVets Equine practice	Midshire Farm and Equine



Figure 1. Older horses are often much loved members of the family

Dentition

Horses have hypsodont teeth, which means that their teeth continue to erupt throughout their life. Horses wear down their teeth by chewing on grass and fibre, and in an adult horse the rate of wear equals the rate of eruption. However, in geriatric horses the rate of wear is greater than the rate of eruption, as the reserve crown has been lost.

The main aims of dentistry in the older horse include:

- Reduction of any sharp enamel points that may cause soft tissue injury or ulceration.
- Examination of any focal overgrowths and correction of these if they are causing injury or are affecting a horse's ability to eat.
- Examination of any loose teeth and removal of these if required.
- Examination for the presence of diastemas (gaps between teeth) and appropriate treatment depending on the diastema.

As an older horse's teeth continue to get worn down, their ability to chew long fibre, such as hay, will reduce and thus it is essential that dietary care is considered alongside routine dentistry. Older horses may benefit from replacing some or all of the long fibre in their diet (hay/haylage) with short chop fibre such as chaff, alfalfa, or grass nuts, as these are more easily chewed.

Hoof Care

Regular visits from your farrier are vital to ensure that your horse's feet remain well



Figure 2. Short chop fibre such as chaff is more easily chewed than long fibre such as hay

balanced and trimmed. Your farrier will also be able to help you identify if there are any problems developing with your horse's feet.

Some older horses may find firmer, frosty ground harder to walk on, even if they have coped all summer unshod - these horses may therefore benefit from front shoes to prevent solar bruising.

Although we see more cases of laminitis in the spring and summer, it is important to remember that laminitis is not a seasonal disease and so it is important to continue to monitor your horse's feet all year round, especially if they have a history of laminitis.

Worming

Older horses are more susceptible to worm infestations, as they do not develop immunity to the majority of gastrointestinal worms. Therefore it is important to pay close attention to their worming regime. Strategic worm control (worming your horse based on the results of faecal worm egg counts) is the recommended method as it reduces the development of drug resistant worms, as well as being the most cost-effective approach. It is important to remember that faecal worm egg counts do not detect tapeworms or encysted cyathostomes (small redworms), so you will still need to treat your horses for tapeworms and encysted cyathostomes every winter.

Nutrition

Many horses will lose weight as they get older. Once common underlying causes of weight loss, such as dental disease, PPID (Pars Pituitary Intermedia Dysfunction, also known as Cushing's syndrome), liver disease, worms and any other medical conditions have been excluded, it is worth considering implementing changes to their diet. These can include:

- Access to good quality grass for as much of the year as possible

- Feeding an age-specific conditioning mix with a high protein content
- Adding in oil (up to 1ml/kg bodyweight daily)
- Feeding haylage instead of hay due to its higher calorific contents
- Using rugs to reduce energy and calories used to keep warm

Older horses will lose muscle condition when they retire from work, especially if they have PPID, so a change in their body shape is inevitable.

Using a weigh tape and regularly body condition scoring your horse will help you to monitor your horse's weight.

Other points to consider with your older horse:

- Older horses have a poorer immune system so keeping their vaccinations (influenza and tetanus) up to date becomes even more important.
- Older horses may cope less well with changes in weather, so consider whether their shelter and rugging is suitable for their needs.

Blood screening

Blood tests can be an invaluable aid, not only for diagnosing disease, but also when carried out routinely can provide an early warning of any developing illness.

Blood samples can be taken to screen your horse for Cushing's syndrome and liver disease as well as other medical diseases. Although it is rare to see any problems associated with long term NSAID (non-steroidal anti-inflammatory drugs) use, blood samples can be used to monitor your horse's health and can allow for treatment or management changes to be implemented if changes are detected.



Figure 3. Regular blood tests can be an invaluable aid for monitoring disease and illness.

Cushing's syndrome, also known as Pars Pituitary Intermedia Dysfunction (PPID), is the most common hormonal disease of older horses and ponies. Clinical signs associated with PPID can include:

- Laminitis
- Excessive sweating
- An abnormal hair coat
- Increased appetite
- Increased drinking and urinating
- Lethargy/poor performance
- Recurring infections
- Loss of muscle condition and/or a pot bellied appearance.

Although there is no 'cure' for PPID, appropriate medical treatment and good routine health care, including regular blood sampling, can help keep horses with PPID fit and healthy.

Just like us, horses need a little more care and attention as they get older. Paying attention to their health status and requirements helps ensure they remain happy and comfortable as the years pass by.

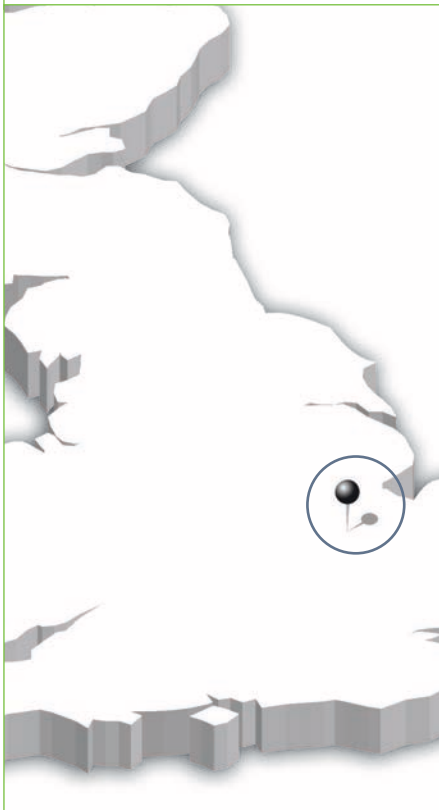


Figure 4 & 4a. Appropriate treatment of PPID can help keep your older Cushingoid horses and ponies fit and healthy

Dr. Stuart Thorne BSc PhD BVSc MRCVS, Fellowes Farm Equine Clinic Ltd
Member of the Association of British Veterinary Acupuncturists



Fellowes Farm Equine Clinic Ltd
VETERINARY SURGEONS



Veterinary surgeon **Dr. Stuart Thorne**

XLVets Equine practice **Fellowes Farm
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Acupuncture in horses

What is it?

Acupuncture has been used for thousands of years with obvious benefits for both humans and animals. Until recently it was still regarded by some as a 'fringe' technique, however advances in neuroscience have given an increased understanding of the neurophysiological mechanisms of its action, and so it has become more mainstream.

The benefits in horses are now recognised and documented for a wide range of conditions, and as such many insurance companies now cover acupuncture costs as part of a horse's treatment regime.

By law, acupuncture can only be performed on horses by a qualified veterinary surgeon, and the Association of British Veterinary Acupuncturists organises courses and qualifications for vets who want to specialise further.

How does acupuncture work?

When fine needles are inserted into and through the skin they stimulate nerve endings which carry impulses to the spinal cord and brain. This results in responses within the nervous and endocrine systems, leading to the release of neurotransmitters and hormones. These in turn influence the function of the body tissues and organ systems. Acupuncture also increases the release of natural painkillers such as endorphins, enkephalins, serotonin and noradrenaline which act on the pain pathways and can block the transmission of pain signals.

Recent studies in humans involving functional MRI scans have shown profound changes in the connectivity of neural structures involved in homeostasis (the body's mechanism used to maintain its parameters within a normal range i.e. keeping the body in balance). This provides the science behind the Traditional Chinese Medicine viewpoint that acupuncture aims to rebalance and harmonise the body. In summary, we now have the scientific knowledge and vocabulary to explain the beneficial effects recognised by the ancient Chinese many thousands of years ago.

In the Western Scientific Approach, needles can be placed in acupuncture points, myofascial trigger points (hyperirritable areas within a taut band of muscle), and tender points, together with needling of appropriate spinal segments. Once in place the needles may be manipulated by hand or attached to an electro-acupuncture unit to produce a more profound response. When the pulse

generator is set to alternate between high and low frequency stimulation, it has particular benefits in the treatment of chronic back pain.

Which conditions can acupuncture be used for?

Acupuncture is particularly useful in the relief of musculoskeletal disorders, especially chronic pain. Therefore in the horse it is regularly used in the treatment of sacro-iliac pain, arthritis and muscle soreness, especially of the neck, shoulders, back and hindquarters. It is useful in providing pain relief and assisting recovery following injury and can be used to 'fine tune' horses to optimise their performance when they do not necessarily have a significant clinical problem.

Although it can be used on its own, it is often used to complement conventional veterinary treatment. A multimodal approach is used by first employing cutting edge veterinary technology to aid diagnosis (digital radiography, gamma-scintigraphy and ultrasonography) and then using the latest treatments (stem cell therapy, surgical lasers and shockwave therapy) combined with traditional treatments such as acupuncture and physiotherapy.

Summary

The ancient technique of acupuncture can be used in conjunction with conventional diagnostics and therapies to provide a valuable tool in the veterinary treatment and management of horses.

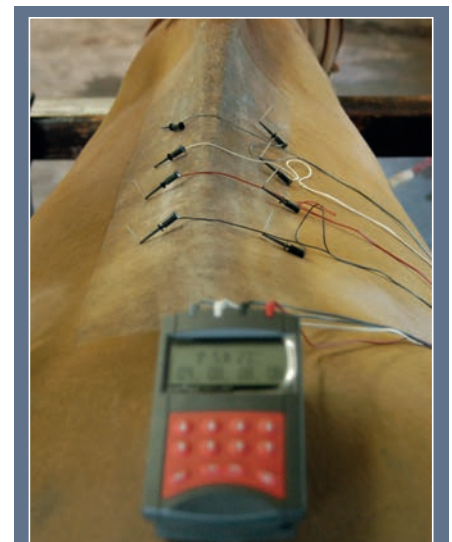


Figure 1. Electro-acupuncture

Kyle Tindall-Read BVSc MRCVS, Durham Equine Practice

Seeing clearly: Rosie May and the case of the corneal ulcer

We are always relieved when clients contact us sooner rather than later - particularly when it comes to eye trouble.



Veterinary surgeon Kyle Tindall-Read

XLVets Equine Practice Durham Equine Practice



Recently my rounds took me to see Rosie May, a 12-year-old donkey residing in Richmond. Rosie May, so named because she was born on a rosy morning in May, is the daughter of Ruby Tuesday and described by her owner as 'lovely, but very mischievous'.

Prior to my call out, Rosie May's owner had noticed her rubbing her fly fringe into her eye and was concerned she had caused herself some damage.

On my arrival it was clear that Rosie May's owner had done the right thing, as the jenny was showing several signs of a painful eye - **blepharospasm** (keeping the eye closed), **lacrimation** (excess tear production) and swelling around the eye.

An examination of the eye with an ophthalmoscope revealed that, luckily, Rosie May did not appear to be suffering from uveitis, an inflammation of the middle layer of the eye.

There was no constriction of her pupil and she was not sensitive to light. However, there was some mild cloudiness of the outer surface of the eye (cornea) and there was a line of opacity visible along the lower part of the eyeball, which suggested a defect in the cornea.

The next step was to use fluorescein dye, an orange chemical that turns to a bright green and sticks to any disruption in the cornea. The result was impressive - a vivid line of that confirmed that Rosie May had a corneal ulcer (Figure 1).

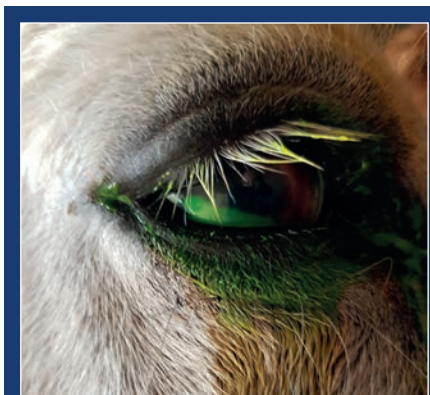


Figure 1. Fluorescein dye helps identify problems with the cornea

Corneal ulceration is a fairly common condition in horses and donkeys, but with the right care often heal without complication.

However, they can worsen dramatically, resulting in loss of vision in the affected eye or even necessitating its removal. With that in mind, treatment should be started as soon as the diagnosis is made.

In Rosie May's case, the treatment was a three-pronged approach:

- Systemic non-steroidal anti-inflammatory drugs (NSAIDs) to help bring down the swelling and make Rosie feel more comfortable
- Topical chloramphenicol drops - an antibiotic to prevent infection
- Topical serum drops - I took blood from Rosie which was allowed to settle and clot. The remaining liquid, called serum, contains substances which help speed up the healing process

A few days later, I returned to assess Rosie May's progress. The result was just what I wanted. Her eye was no longer swollen, she was happy to open it and there was a normal amount of lacrimation. The ophthalmoscope revealed a slight cloudiness where the ulcer had been, but on applying fluorescein dye, the ulcer was no longer visible (Figure 2). I advised continuation of the treatment for another couple of days to be sure the ulcer had completely healed.

Thankfully, Rosie May was a very cooperative patient and has now fully recovered.

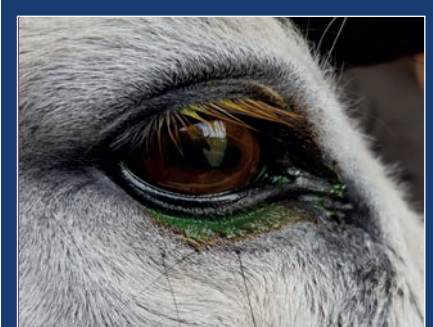


Figure 2. The absence of any green colouring meant the ulcer had been successfully treated and life went back to normal for Rosie May



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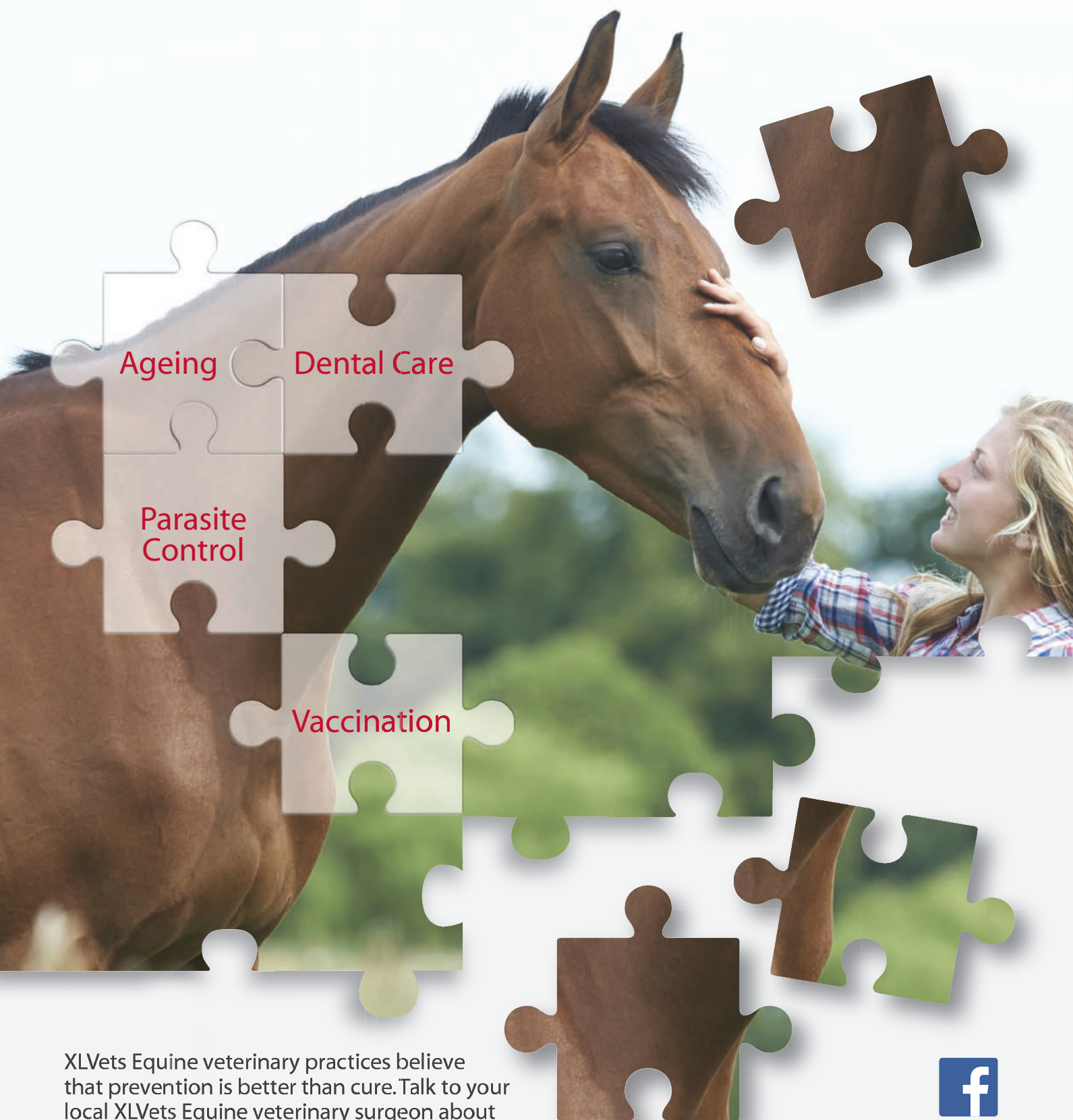
To enter please visit:
www.facebook.com/XLVetsEquine/ and list your three answers in a direct message.

Deadline for entries: 31st January 2018

Good luck!



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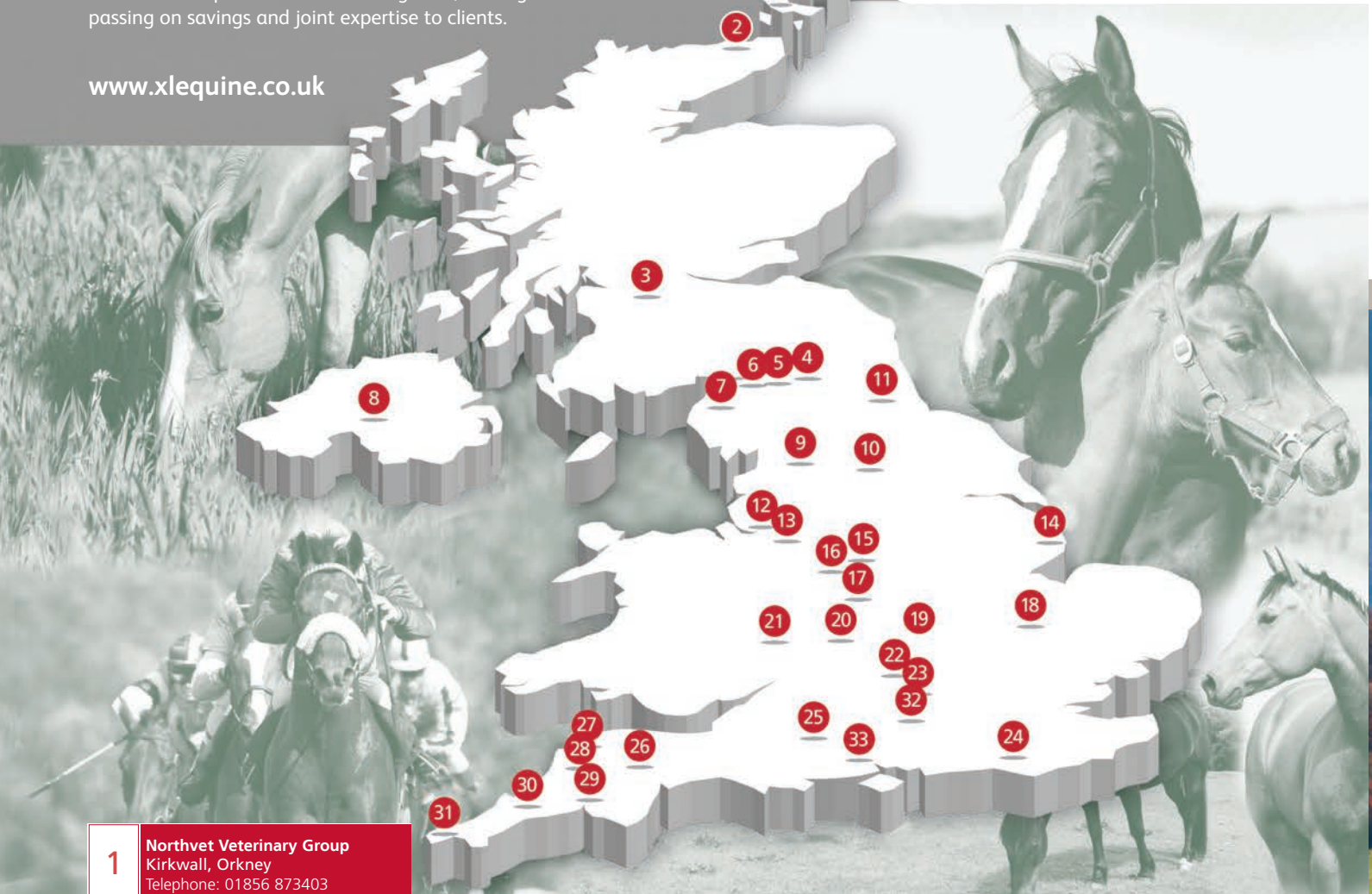


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