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Welcome to the May issue of Veterinary Practice magazine, distributed digitally due to the coronavirus pandemic.

The global crisis is reflected in our content this month. Former Veterinary Practice senior editor Jennifer Parker spoke to BVA Junior Vice President James Russell about how the veterinary profession is unifying in the face of the pandemic and Richard Gard discusses its implications for cattle vets. In the equine section, BEVA President Tim Mair discusses BEVA’s response to the global crisis and John Periam reports on an equine hospital under lockdown. Laura Woodward gives advice on coping with anxiety during the pandemic. In the practice management section, you can find out more about options available to employers and tips on maintaining good client relations during lockdown.

In lighter news, May is veterinary nurse awareness month and we are launching our brand-new veterinary nursing section! This will be a monthly addition to the magazine featuring articles specifically tailored for veterinary nurses. Debuting this month, make sure to check out Stuart Saunders’s article on making the most of your team’s nurses, as well as an in-depth article by Sanne Melis on the use of non-traditional analgesia, tying in with our in-focus topic this month: pain management.

Continuing this theme, Will McFadzean provides useful information about loco-regional anaesthesia in small animal practice and Andy Fiske-Jackson writes about the management of back pain in horses. Ashton Hollwarth investigates the evidence-based use of analgesia in exotic pet medicine and RCVS Knowledge explores the evidence behind the use of meloxicam as pain relief in rabbits.

Other features this month include an article on the sustainability of pet ownership and an informative article on Nematomorpha in springtime lambs by Jim Hopkins. The small animal section showcases a double dermatology feature, with Anita Patel describing cutaneous vasculitis and Emelie Fogelberg exploring topical therapy for skin diseases. Make sure to read BVLGBT+ President Dan Makin’s opinion piece on the importance of having a safe working environment.

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Dermatology

History and clinical signs are essential for a definitive diagnosis of vasculitis, as well as determining a treatment plan.

Topical therapy can be a very helpful aid when managing allergic, infectious and seborrhoeic disorders.

Urinalysis and routine blood tests play a crucial role in the investigation of haematuria and very frequently have to be followed up with diagnostic imaging.

Broken nails are common but it is another matter when all the feet are involved and nails start falling out.

Evidence-based analgesia in exotic pet medicine.

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Evidence-based analgesia in exotic pet medicine.
How much of that getting better is us and how much is biology resolving matters on its own?"

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Dan Makin
"We all have it in us to be a hero and help others"

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COVID-19
BEVA President Tim Mair discusses the association’s response to the pandemic.

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Equine hospital in lockdown
In the face of the coronavirus pandemic, veterinary practices are having to adapt to new ways of working.

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What are the options for managing pain in a different way?
Non-conventional analgesics may be useful when traditional drugs are insufficient or need to be avoided.

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Better utilising your nurses
Why are so many practices still not maximising the potential of their veterinary nurses?

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What are the options available to employers in the face of the current COVID-19 pandemic?

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Larger Animal
38 COVID-19
How is the current global pandemic affecting the work of cattle vets in the UK?

40 Parasitology
As the spring progresses and lambs are out at pasture, we must remain mindful of Nematodirus.

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What do I need to consider as landlord of a practice?

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Maintaining good client relations during lockdown.

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BSAVA produces resource hub during COVID-19 pandemic

The BSAVA has unveiled a new resource hub, including a new triage tool specifically tailored to help vets in small animal practice identify and process emergency canine and feline cases during the challenging circumstances presented by the COVID-19 pandemic. The tool is available to all vets, free of charge.

The chart enables vets/nurses and receptionists to quickly identify urgent, potentially urgent, non-urgent and delayable cases to help limited veterinary resources be used efficiently without compromising animal health or welfare. The chart has numerous pages of supporting resources, produced by the same specialists.

Sue Paterson, BSAVA President, said: "During these exceptional and worrying times veterinary surgeons need as much practical help and support as possible. We are hugely grateful for the indefatigable support of an enthusiastic group of volunteers who have rapidly produced this triage tool, which we are now able to share. It should enable patient queries to be processed, reliably and efficiently, allowing for emergency patients to be seen as a matter of urgency, within the current government and RCVS guidelines."

RCVS Knowledge launches COVID-19 resources hub to support the professions

RCVS Knowledge has published a hub of COVID-19 resources to help veterinary professionals access vital information and advice about the pandemic as easily and quickly as possible.

The webpage features a webinar about infection control and biosecurity during COVID-19, which covers the science of coronavirus, evidence related to the virus and practical advice for practices about how to help stem its spread.

The resources page includes veterinary advice and updates, research references and evidence reviews on relevant topics. It also brings together materials provided by veterinary practices and vet schools, as well as guidance from government agencies around the world.

SPVS provides tools and top tips for COVID-19 economic sustainability planning

SPVS has launched two webinars addressing the significant financial and practical challenges for veterinary practices that COVID-19 has created, as highlighted in the recent SPVS-VMG survey. Income reductions of between 40 and 60 percent have occurred and practices have to consider how best they can restructure their practices most effectively.

The first, designed for owners, financial planners and managers, involves Mark Harwood of Hazlewoods Accountants, vet and business consultant, Peter Gripper from Anval, and three vets from practice, giving a detailed assessment of the financial impact of COVID-19 on veterinary practices. It also includes a presentation of the "Anval SPVS Scenario Planning Calculator Tool" to help you choose the best strategy for your practice, tips on how to use profit and cash flow analysis to aid financial planning, information on additional funding streams available and top tips and experiences from three veterinary owners.

The second is a shorter extract from the full-length broadcast designed for the whole practice team, in which Peter Gripper and Mark Harwood are joined by three vets who describe the actions their practices have taken including the importance of collaboration; balancing finances, client needs and keeping your practice team healthy; and opinions on longer term planning for COVID-19.
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In partnership with ISVPS
RCVS agrees 25 percent reduction in 2020 CPD requirements for vets and vet nurses

The RCVS has agreed to reduce the annual requirement of hours of CPD that veterinary professionals are expected to undertake in 2020 by 25 percent due to the ongoing COVID-19 pandemic and the UK government’s measures to reduce its transmission.

The annual minimum requirement for veterinary surgeons will be reduced from 35 to 26 hours of CPD, while that of veterinary nurses will be reduced from 15 to 11 hours. The reduction comes into force immediately to help relieve the pressure on vets and vet nurses, who the College understands are facing significant and competing challenges in the coming weeks and months. A similar 25 percent reduction will also be introduced for veterinary surgeons holding Advanced Practitioner or RCVS Specialist status, as retaining these statuses requires additional hours of CPD, including in the specific areas of designation.

The decision to reduce the hours was made on Monday 30 March 2020 by the new RCVS Council COVID-19 Taskforce, chaired by RCVS President Dr Niall Connell, which was set up in order to make temporary policy decisions related to the pandemic in a quicker and more agile way. The proposal had previously been considered and supported by the RCVS Education Committee, VN Council and CPD Policy Working Group.

Niall said: “As a compassionate regulator, we recognise that although some veterinary professionals have seen a reduced workload, there remains immense pressure on very many members of the professions to juggle professional and family, childcare and other caring responsibilities in very difficult circumstances.

“A number of veterinary surgeons and veterinary nurses expressed concern that it may be difficult to undertake CPD at present and so, in order to give the professions some breathing space, we decided we would reduce the minimum hours required for 2020. We also recognise that some practices are having to make the difficult decision to reduce their CPD budgets this year in response to falling footfall.

“However, it is worth reiterating that CPD need not be expensive or require physical attendance at lectures, congresses or other events. There are many online providers of CPD and other resources such as articles and webinars, some of which may be free. The key is that the CPD is relevant to you and enhances your professional practice and so we would still encourage all our members to undertake CPD as and when they can.”

RCVS provides guidance for how veterinary professionals can help the national effort against COVID-19

Following many requests from veterinary surgeons and veterinary nurses on how they can help in the national effort against coronavirus (COVID-19), the RCVS has published new guidance for the professions on how to best utilise their skills and experience.

The RCVS has been in discussion with a number of other parties in order to clarify the situation and develop appropriate guidance for those members of the profession who wish to help.

The guidance highlights certain areas of critical national importance in which veterinary surgeons and veterinary nurses can use their skills, particularly around keeping the food supply chain operational during the lockdown period. This includes maintaining the food supply as a red or white meat Official Veterinarian (OV), and supporting the livestock industry and the animal product export/import industry. Other areas where veterinary professionals can contribute are through donating veterinary equipment that can be re-purposed for use by the NHS, for example, ventilators, anaesthetic equipment/gases and personal protective equipment, and signing up to the NHS “volunteer army”.

One of the most common queries received by the RCVS regarding how veterinary surgeons and veterinary nurses can help is around whether they could use their skills and expertise in frontline clinical roles within the NHS. The RCVS is also aware that some NHS Trusts are already advertising for assistance or approaching veterinary professionals directly.

The RCVS would urge veterinary professionals who wish to get involved in the national effort against coronavirus to read and consider its guidance in full before making any decisions, and also to consult its Standards and Advice Team.

The full guidance can be found at r cvs.org.uk/coronavirus

The RCVS Standards & Advice Team is available to contact on advice@rcvs.org.uk or 020 7202 0789
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Call for applications for 2020 VMG research grants

Applications for the 2020 Veterinary Management Group (VMG) Research Grants are now open.

Practice staff, managers, clinicians and researchers are invited to apply for an award of up to £2,000 to fund a research project to support the development of best practice in any area of veterinary business, leadership and management. The deadline for applications is 28 August 2020.

The VMG launched its Research Grant Scheme in 2019 to encourage research that enhances understanding of the contemporary veterinary sector, including strategy, people, finance and marketing; or explores how management and leadership theory can be applied to the sector’s everyday work. Topics being researched by 2019 grant holders include gender and entrepreneurship, corporatisation, and career pathways. The three recipients will report on progress later this year, prior to presenting their full results and recommendations at a new evidence-based practice showcase during VMG-SPVS Congress in January 2021.

Applications for 2020 MSD Animal Health research bursary for veterinary nurses now open

MSD Animal Health is inviting veterinary nurses to apply for the 2020 MSD Animal Health Research Bursary for Veterinary Nurses, supported by the BVNA. One £1,000 bursary will be available to the student or qualified veterinary nurse in the UK with the best research project application. There is also an opportunity to win additional prizes of £1,000 and £500 for the best research project presentations at the MSD Animal Health Research Bursary Awards Day. The deadline for applications is Friday 26 June 2020.

Michelle Townley, veterinary advisor at MSD Animal Health, adds: “We had a lot of interest in last year’s veterinary nurse awards and are keen to encourage as many applications as possible again this year. Our focus is on awarding work that can easily support future developments within the industry. MSD Animal Health is committed to preserving and improving the health, well-being and performance of animals so we aim to select research projects that fit well with this important goal.”

For further details, please visit the MSD Animal Health Research Bursary website at msdahresearchbursary.co.uk

For further details, please visit the VMG Research Grant Scheme website at vetmg.com/vmg-research-awards

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1. Credelio, Summary of Product Characteristics, July 2018
Unifying in the face of crisis

What is the current advice for ensuring the profession upholds its promise to protect animal health throughout the COVID-19 pandemic?

A midst criticism of the UK government’s response to the pandemic, the veterinary profession continues to pull together to ensure animal health isn’t compromised at this difficult time. I spoke to James Russell, Junior Vice President of the BVA, to find out about the latest developments and advice for veterinary professionals.

The BVA has been urging vets to write to their MPs to help secure financial support for the profession; what have the responses been like so far?

MPs recognise that we are being asked to provide the service crucial to animal welfare and food productivity at a time when we haven’t got the income to pay our staff in a normal way. A lot of locum vets are working as limited companies, which may mean that they’re not in receipt of much of the government’s intended support, if any at all. I’m aware of half a dozen independent practices where the lion’s share of the work is now being done by the owners who are, again, directors of limited companies and are not able to access any of the financial support. We’ve received a number of responses [from MPs] and overwhelmingly they’re supportive – we await to see what comes back out of treasury.

How should practices be responding to news that we might see a shortage of PPE?

If we’re simply taking a cat in a cat basket that’s been left at the door of the surgery to work on, gloves or good handwashing should be perfectly adequate. The times where that’s not going to be adequate are where either we’re forced to work more closely with colleagues or we’re asked to examine animals in homes. The animals are no greater risk than any other surface – it is the aerosol risk from people which we need to give special consideration to. In the first instance, we need to maximise the distance between us and those people. We can be prudent with the PPE we use without increasing the risk to any of our members.

What are the One Health implications of the outbreak? Are there any other ways vets could be using their skillsets to help tackle the pandemic?

The BVA is calling for people, first and foremost, to use their veterinary skills to help. There are potential pinch points coming up – with inspectors in slaughterhouses, for example. We need to make sure we can keep the food chain going. We should also consider those jobs that aren’t primarily veterinary jobs, like helping to move livestock on-farm to enable veterinary examinations. We remain ready as a profession if at any point the government asks us to support and engage with other services in a different way.

We’ve helped to promote the call for oxygen and making sure that empty oxygen cylinders go back into the system, and are beginning to think about the distribution of ventilators.

More broadly on One Health, I think there is a fantastic opportunity to demonstrate unity across our profession and make sure that we maintain animal health and welfare in the face of these challenging times. We can’t forget the role that vets are playing in supporting areas like animal trials of vaccines. There are potentially underutilised resources: we’re aware of laboratories who put themselves forward to help with processing COVID testing and as yet we don’t believe the offers have been taken up by government.

How is the farm vet sector coping?

Animals can behave as a surface for the virus to live on in just the same way as a paper plate or a bottle of milk might, but the animals aren’t actively shedding the virus. So when we’re on-farm, we’re having to change our mindset slightly – we’re very used to thinking about biosecurity and making sure we don’t take an animal disease from one farm to the next, or even spread it on the same farm – now we’re having to extend that thinking to “how do we behave with our farmers to make sure that we minimise any aerosol risk?”

JENNIFER PARKER

Jennifer Parker, BSc, PgDip, MSc, is a freelance science writer and illustrator. Former Senior Editor of Veterinary Practice magazine, she left the publication in 2019 to pursue a freelance career. Her key interests are wildlife conservation, animal health and human behaviour change.
Is it likely that small animal vets will be asked to step in to fill gaps in large animal work?

We’re not aware of those pressures at the moment. The only point we can see that coming down the track is with meat hygiene work. In Scotland and Northern Ireland, there has been a call for people who have previously been meat inspectors but haven’t done it for a few years to reaccredit themselves so they can help in that area.

Is there anything we’ve learnt from the pandemic that could better inform responses to future crises?

It is crucial to make sure we are unified as a profession and that we are supporting people in a consistent and constructive way. Making sure we maintain really positive channels of communication right across the profession is something that we’ve done on the whole very well, but recognise that we can continue to build on.

We also need to recognise that there is a shortage of vets being produced in the country. We rely on regular inputs of vets who aren’t UK-trained, so we need to question how resilient that makes our workforce.

Do you have any advice for practices trying to retain good communications with clients?

Using social media and video messages is a really good way of staying in touch with clients. Melton Vets in Melton Mowbray put up a lovely message to their clients on their Facebook page asking them to be patient with them, saying that they would prioritise the work that needed doing, and asking for clients to recognise that they need to protect themselves as well. They update those clients on what they should expect from them this week, next week and next month, making sure that that dialogue runs open.

How can members of the profession support their colleagues through the challenging weeks ahead?

It’s important to be able to support those in the profession who are doing jobs they aren’t used to doing; for example, vets undertaking a receptionist job to keep things running smoothly. We must make sure that we keep all our channels open as a profession.

Don’t put too much expectation on yourself. It’s a really unusual time. If you’re at home with three kids who need home schooling, please don’t expect yourself to put in eight hours of work as well. We need to be fair on ourselves and accept that we’re working at a slightly different pace than normal.

Vet Life has put out some lovely resources to guide people, including students, people in practice and people on furlough: vetlife.org.uk/covid-19-and-support-for-the-veterinary-professions
Extra help to protect unprotected pets

Agria Pet Insurance has devised some unique solutions specifically to safeguard pets through these unprecedented times.

With coronavirus restrictions making it harder for owners to access practices for their pets’ routine care, some puppies and kittens are being left unprotected. So, Agria Pet Insurance has devised some unique solutions specifically to safeguard pets through these unprecedented times.

Crucially, to continue supporting pets and owners through this period, Agria has relaxed their usual rules around vaccinations. Pets that haven’t received primary vaccinations due to the coronavirus outbreak and develop an issue that would have been prevented by a vaccination they were unable to access, will now have that condition covered under their Agria policy.

Additionally, pet owners can set up their own four weeks’ free Agria Pet Insurance policies, ensuring they don’t miss out on cover they would usually get at their practice. This is available for all UK practices to offer their pet owners, not just those partnered with Agria.

Simon Wheeler, managing director of Agria Pet Insurance, says, “We have introduced these additional products during the pandemic to ensure that pets remain covered despite new and significant challenges faced by vets and owners. We hope that they alleviate a little of the pressure faced by veterinary staff and worry felt by owners.”

The following links have been put together by Agria Pet Insurance for veterinary teams in the UK:

- A “how to” guide for you and your team to explain the changes: agriapet.co.uk/GUIDE
- Agria’s blog for you to share with your pet owners which includes guidance on how to keep unvaccinated pets safe and an easy link to set up the free insurance: agriapet.co.uk/HEALTH
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How can we encourage owners to start considering their pet’s environmental pawprint?

When aiming to reduce our impact on the environment, we should also be thinking about sustainable pet care

Pets are increasingly considered by owners as additional family members (Pet Age, 2014). Like every additional human on the planet, each pet also carries a significant environmental footprint through their lifetime through food and living requirements, health conditions and waste production. Pets also have a huge role in bringing companionship, happiness and health to so many people, as well as of course providing us our career as veterinarians. So how can we be encouraging owners to make pet ownership as sustainable as possible?

The pet population
Pet ownership is on the increase with approximately 50 percent of UK households owning a pet in 2019, including 9.9 million dogs and 10.9 million cats (PDSA, 2019). Dogs Trust estimates that 24 percent of households own more than two dogs, and that 130,000 dogs come into UK rehoming charities each year (Casey, 2020). With each pet carrying its own ecological footprint, do we need to persuade the nation to have fewer pets? Areas to consider include:

- Discourage keeping of an excessive number of pets
- Encourage rescued pets (ideally from the UK)
- Encourage early neutering wherever appropriate
- Investigate puppy farms and unscrupulous breeders
- Consider pets with lower dietary carbon footprints such as a small herbivore

Nutrition
As carnivores, dogs and cats also carry a significant dietary footprint due to high meat consumption, with one study in America suggesting that their diets may constitute 25 percent of the environmental impacts from meat production (Okin, 2017). Raw and “human-grade” pet foods are on the rise – with a move away from feeding only what isn’t suitable for human consumption as pets become increasingly anthropomorphised. Many pets are also overweight with owners feeding more than daily recommendations. With roughly one third of all food being wasted (FAO, 2011) this is also an important area to target. Areas to consider include:

- Support food manufacturers that use by-products from the human industry
- Support further research into low meat/vegetarian pet foods or other sustainable sources such as insects
- Dissuade feeding of raw diets due to the higher meat content, especially if the meat would otherwise be for human consumption
- Tackle obesity cases and advise against over- or wasteful feeding

FRANCES HADDOCK
Frances Haddock, BVSc, MRCVS, is a veterinary surgeon and is currently studying for a certificate in small animal medicine. She is also an environmental activist, runs the blog "envirobite" on sustainability issues, writes for the weekly environmental newsletter "Curious Earth" and is a member of the Vet Sustain community

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Reducing plastic waste
With pets being treated as family members, this inevitably means they come with their own belongings, which has the potential to lead to plastic pollution. There are also huge issues with excessive plastic packaging on human food and the same is true for pet foods. Some traditional packaging like tins are already easy to recycle and there have been some great initiatives set up which recycle previously non-recyclable items like sachets. Areas to consider include:

- Support bulk buying and food manufacturers with compostable/recyclable packaging
- Support pet food packaging recycling schemes which could be set up in practice
- Support and sell more environmentally friendly toys and accessories such as those made from sustainable or recycled materials
- Support second-hand purchase of pet products
- Don’t encourage the transfer of the human taste for materialism into the pet world

Protecting wildlife
The 2019 State of Nature report confirms our UK wildlife is in crisis with 15 percent of species now threatened with extinction (State of Nature Partnership, 2019). As veterinarians, we should prioritise protection of wildlife along with caring for companion and livestock animals. Although the RSPB states that there is no evidence predation from cats is causing UK bird declines (RSPB, 2020), they are still thought to catch many prey animals yearly in the UK. Dogs can also displace and distress wildlife. There is also evidence of significant neonicotinoid contamination in UK rivers which has been linked to ectoparasite treatment of companion animals (Shardlow, 2017). Areas to consider include:

- Discourage wildlife hunting by putting a bell on cats and considering keeping them indoors at night
- Prevent dogs from harassing wildlife
- Treating and rehabilitating wildlife in practice or via charities
- Support research into harm that endo- and ectoparasite treatment is causing wildlife
- Move away from blanket parasite prevention and products and move towards parasite testing and risk assessment (Prentis, 2020)

Problems with faeces
Whilst the faeces of herbivores is generally safe to compost and go to landfill, faeces from our carnivore pets comes with a whole range of problems. Firstly, these faeces may pose a public health risk due to the presence of pathogenic microorganisms (Cinquepalmi et al., 2012). Secondly, if carnivore faeces finds its way to water sources it can lead to eutrophication and damage to aquatic ecosystems. Compostable/biodegradable bags are popular but will generally not break down in landfill due to anaerobic conditions, and if they do will produce significant amounts of methane. Areas to consider include:

- Picking up and responsible disposal of faeces is essential
- Composting where possible – herbivore and bird faeces is generally safe to be composted. Composting dog and cat faeces is generally not advised due to the risk of pathogen contamination, especially toxoplasmosis from cats. However, there are some online guides for composting systems for dog/cat waste, that need to be carefully managed and not used on edible crops.
- Avoid clay-based cat litter which is extracted via environmentally damaging mining processes; consider natural sources or products made from recycled materials
- Support systems that use animal waste in biodigesters to produce energy

In summary
When we consider reducing our personal environmental footprint, our pets probably aren’t the first thing that springs to mind. However, in the climate crisis we are enduring, every piece of our lifestyle is worth taking into account. If we are to make the veterinary world more sustainable, knowledge of some of the areas above in which we can advise our clients on more sustainable pet care is one important piece of the puzzle.

References
FAO (2011) Global food losses and food waste – Extent, causes and prevention. Rome
Okin, G. (2017) Environmental impacts of food consumption by dogs and cats. PLOS ONE, 12, e0181301
Coping with anxiety during the pandemic

Acceptance of the anxiety we feel, rather than trying to push it away, goes a long way to diffusing it and reducing its hold over you

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The uncertainty and fear are palpable on the way to work, at work, travelling home from work, even in the (possible) safety of our own homes.

We have to socially distance while examining a patient being held by a colleague, manage our clients’ fears and anxieties and manage our own fears and anxieties about our families while being professional at all times.

It’s crowded where some of us work, and so difficult to stay 2m apart.

The shame we feel for using public transport to get to work adds to the anxiety, clutching onto a letter stating that we work as a vet in an emergency hospital, as if it were the only thing keeping us safe.

The moral dilemma adds to the stress. Each and every one of us has to stay at home, protect the NHS and save lives. But here we are getting public transport to work feeling like we alone are responsible for this pandemic perpetuating.

And when we get to work, circumstances such as a lack of surgical disinfectant, shortage of face masks and gloves, postponement of prophylactic treatments and the inability to help our clients with their concerns all add to the “moral injury”.

Moral injury is what can leave us with long-term psychological scars if we allow it to.

The feeling that we cannot perform as well as we should and that our patients and clients will inevitably suffer is hard to come to terms with.

We have handed our ventilators over to the NHS. Whether you think that’s morally right or wrong, it follows that some of our patients may die as a result and we won’t be able to feel or to say that we did everything we could do.

These moral injuries, injuries to our ethics, can have long-lasting negative psychological effects. Sir Simon Wessely, professor of psychological medicine at the Institute of Psychiatry, King’s College London, says moral injury is “where you know you didn’t do everything you could have done”. It makes us feel angry, it makes us feel guilty and it makes us feel ashamed.

Fear of the unknown causes more anxiety and we constantly have to improvise. Then the advice changes again.

Previously, many of us learnt to leave work at work. Then we would leave the hospital and manage to have a life outside of work and in our homes where we would recharge. This pandemic changes all of that. It’s everywhere. There is no life outside of work that is free from COVID-19. And home is where we may be spreading the virus we picked up on the tube.

So what can we do?

We’re already washing our hands, social distancing and self-isolating.

We’re clapping on our doorsteps and sending the NHS hospitals enough sweets through Amazon to make sure the dental profession flourishes after the pandemic.

Clear leadership, communication and an acceptance that the situation may result in decisions that would not normally be best practice are needed.

We can draw up new and temporary protocols for this time. These protocols need to be agreed by us as a team otherwise they will harm our mental well-being further. When you’re tired and anxious and afraid, it’s nearly impossible to implement protocols you don’t agree with. So, more than ever, we need to be a team leading from within.

The emotionally intelligent team leader will facilitate this, coordinate the decision-making processes and produce clear instructions for the team made by the team.

Good leadership enables teams to support each other. We’ve talked before about the three types of empathy and how highly functioning teams have all three running at full throttle. So, we need each other. We need the social interactions we normally take for granted. We need the hugs which are banned. We need to be with each other in the moment when cases are going well and when cases are failing.

Acceptance of anxiety

This is not the time to flood the practice with professional counsellors. To be anxious is normal. To be afraid is a given. To feel shame is expected. Where else can we find the cognitive empathy other than among our colleagues? From there, the emotional empathy will grow, and we can truly be there in the moment accepting the fact that although this pandemic will pass, for now, it’s not OK.
Imagine this clinical scenario: you create an analgesic protocol for your clinic to ensure rabbits entering your care receive the best treatment available. Your research indicates meloxicam is the analgesic of choice as in comparison to opioids it has a reduced risk of gut stasis, which is a life-threatening complication in rabbits. Meloxicam also has a palatable oral form for easy administration.

You have heard that the minimum suggested dose of 0.2mg/kg may not provide adequate analgesia, and you are unsure if the higher dose of 1mg/kg would be a safe standard protocol. What is the evidence comparing 1mg/kg and 0.2mg/kg of oral meloxicam for significant changes in pain behaviour, and kidney and liver biochemical analytes?

The evidence

Five studies were critically appraised: four investigated safety at each dose rate of meloxicam and two investigated analgesic efficacies. Two were randomised controlled trials and three were prospective clinical trials, which are study designs that can provide strong evidence if performed correctly.

The two prospective clinical trials investigated the efficacy of meloxicam as an analgesic in rabbits based on plasma concentrations; 1 mg/kg of meloxicam achieved plasma concentrations considered therapeutic in dogs and humans. Both trials demonstrated repeatable results, with no rabbit developing significant abnormal changes in liver and kidney biochemical analytes. However, the therapeutic plasma concentration for rabbits is currently unknown, as the use of meloxicam is currently off label with no clinical trials conducted on rabbits. Therefore, the best available evidence is through behavioural pain studies.

Only two studies analysed pain behaviour in rabbits receiving meloxicam at 0.2mg/kg and 1mg/kg. In one study, there were significant differences in behaviour between the low (0.2mg/kg), medium (0.6mg/kg) and high (1mg/kg) groups, with the medium and high doses of meloxicam providing significantly more effective analgesia. Normal behaviour was displayed at a greater frequency as the dose increased, including searching behaviour, interaction with the environment and standing. However, the 1 mg/kg dose was only assessed for the first day post-operatively, before the dosage decreased to 0.5mg/kg for two days. Inactive pain behaviour, remaining motionless in response to pain, was present at every tested dose, indicating that a daily dosage above 1mg/kg may be required to achieve complete analgesia on the first day after surgery.

The other study demonstrated that a 0.2mg/kg dose rate was deemed inadequate based on faecal corticosterone metabolites, an accepted non-invasive, indirect method of assessing stress in animals that indicates the presence of significant pain.

A further study found the meloxicam-treated group (at a dose of 0.2mg/kg) had a faster return to baseline food consumption compared to those treated with buprenorphine or bupivacaine. The authors suggested that this indicated a greater level of analgesia. However, it is unclear whether food consumption is a reliable indicator of pain in rabbits.

Further studies indicate that 1mg/kg of meloxicam is safe in healthy, young rabbits. One study, not included in the critical appraisal, demonstrated the safety of meloxicam up to 1.5mg/kg for five days in rabbits, with no significant changes in biochemical analytes. Another excluded study noted no toxic effects after a single dose of 20 mg/kg of meloxicam in rabbits, although the method deciding this was unexplained.

Conclusion

Based on the current evidence, it appears beneficial to choose the higher recommended daily dose of 1mg/kg when using meloxicam for analgesia in rabbits. The limited number of studies available indicate that 0.2mg/kg meloxicam alone may be an ineffective analgesic in rabbits post-operatively. However, the overall evidence on analgesic efficacy is weak due to limited behavioural data and inconclusive results. There is moderate evidence for the safety of meloxicam in healthy rabbits for both doses.

The subjects are unlikely to be representative of the expected clinical population, as they were mostly healthy, young rabbits from a breed uncommonly used as pets. This could impact the applicability of the evidence in clinical practice.

Research on the therapeutic plasma concentration of meloxicam in rabbits would be useful. Further research should investigate pain behaviour at a dose rate of 1mg/kg or greater, potentially considering more frequent dosing.
Evidence-based analgesia in exotic pet medicine

Options for analgesia in our exotic species are numerous, although not always well known

The use of analgesia in exotic pet medicine remains in its infancy, due to minimal pharmacokinetic studies and a lack of understanding in identifying signs of pain. The majority of analgesia administered to exotic pets in the UK is done so through off-licence use of medications through the prescribing cascade. Veterinary surgeons must provide analgesia to any species showing signs of pain but many may be unsure of the options available to them.

**Mammals**

Many of our small mammals are prey species and therefore mask signs of pain in order to avoid predation. Recent research has developed a number of "grimace scales" for rabbits (Keating et al., 2012), mice (Langford et al., 2010) and rats (Sotocinal et al., 2011) in order to identify signs of pain. Whilst these are currently unavailable for other species, signs of pain are presumed to be similar, generally including hunched posture, abdominal pressing, vocalisation and reluctance to move (Allweiler, 2016) and defensive or guarding behaviours (Figure 1). Some patients are reluctant to show these behaviours when observed, with guinea pigs more demonstrative of pain when observed remotely rather than directly (Ellen et al., 2016).

Meloxicam and carprofen seem to be the most studied of all NSAIDs (Flecknell, 2018); however, vast differences in dose rates do occur. Higher dose rates of meloxicam have been reported as beneficial in mice (Wright-Williams et al., 2007) compared to rats (Ogino et al., 1997). Meloxicam is widely used in practice, as injectable and oral forms are easily sourced and titrated based on species, and currently meloxicam for cats is licensed for use in guinea pigs in the UK. It is important to consider the gastrointestinal comparative anatomy between different small mammal species, as hindgut fermenters such as rabbits and guinea pigs vastly differ in drug absorption compared with omnivorous rodents or carnivorous mustelids. Dosing of NSAIDs should always be based on the most up-to-date scientific data for the species in question.

**Birds**

Pain in birds can be difficult to identify, but as knowledge of bird behaviour increases, so does our understanding of their response to pain. Both reductions and severe increases in preening behaviours to the point of feather destructive behaviours (Figure 2) can be indications of pain (Hawking et al., 2008). Buprenorphine is the most commonly used opioid analgesic in rodents (Stokes et al., 2009). It is a partial mu agonist and is widely thought of as sufficient for normal levels of post-operative pain (Flecknell, 2018). Pure mu agonists such as morphine and methadone can be considered in situations where increased intra- and post-operative pain is expected; however, their duration of action is shorter than that of buprenorphine (Gades et al., 2000). Some concern has surrounded the use of opioids and their tendency to cause ileus in hindgut fermenters, but in clinical practice this is rare (Flecknell, 2018) and it is more likely that the lack of provision of adequate analgesia is responsible for any post-operative ileus observed.

Tramadol is a weak opioid with good oral bioavailability (Flecknell, 2018). Pharmacokinetics of tramadol have been studied in rabbits (Souza et al., 2008), rats (Taylor et al., 2016) and mice (Wolfe et al., 2015) with varying levels of efficacy and so more proven analgesics should be considered prior to, or in combination with, tramadol.

Local anaesthetics are an excellent component of multimodal analgesia, especially when used for peri- and post-operative pain. They are often overlooked due to the relatively small doses required; however, dose rates and toxic doses are similar to those of our other companion species (Flecknell, 2018). Volumes can be diluted with water for injection and administered either by infiltration, splash blocks, topical cream formulations, nerve blocks or epidural injections.

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and Paul-Murphy, 2011), as can isolation from a flock, lethargy, hyporexia and aggression (Lierz and Korbel, 2012).

A study of intramuscular and oral administration of meloxicam following orthopaedic procedures in pigeons showed doses of 0.5mg/kg provided ineffective analgesia, but doses of 2mg/kg resulted in greater degrees of weight-bearing on the affected limb (Desmarchelier et al., 2012). Evidence of pain following experimentally induced arthritis in Hispaniolan parrots was greatly reduced by administration of intramuscular meloxicam at 1mg/kg, compared to doses of 0.5mg/kg and below (Cole et al., 2009). Both these studies indicate that avian patients require far higher doses of meloxicam compared to their mammalian counterparts.

Opioids are useful for moderate to severe pain in birds. There are considerable species differences in distribution of opioid receptors, and due to an early study in pigeons showing 76 percent of receptors in the forebrain were kappa receptors (Reiner et al., 1989), it was assumed that butorphanol was the opioid of choice for avian patients. Recently, studies in American kestrels have shown an increased thermal withdrawal threshold (TWT) after administration of intramuscular buprenorphine (Ceulemans et al., 2014; Guzman et al., 2018), indicating its efficacy in falcons. However, a similar study failed to show any change in TWT after intramuscular administration of buprenorphine in cockatiels (Guzman et al., 2018). A study comparing intramuscular buprenorphine and butorphanol in African grey parrots showed that buprenorphine had no significant effect on withdrawal from a noxious stimulus, but butorphanol did increase TWT. This indicates buprenorphine is not useful for psittacine species, whereas butorphanol remains an appropriate analgesic. Similar studies evaluating the efficacy of intramuscular hydromorphone in orange-winged Amazon parrots (Guzman et al., 2017) and cockatiels (Houck et al., 2018) showed an increased TWT in orange-winged Amazons, however no change in TWT in cockatiels.

Local anaesthetics in birds appear to require much higher dose rates (Hocking et al., 1997). Given the lack of research and the concern for toxicities, they are seldom used (Lierz and Korbel, 2012).

**Reptiles**

There is a misconception that reptiles do not feel as much pain as their mammalian and avian counterparts, as their signs of pain are far more subtle. Debate centres around whether reptiles feel pain or merely react to noxious stimuli (Perry and Nevarez, 2018); however, we should assume an animal can feel pain until proven otherwise and treat as such. Pain assessment should be carried out at a distance if possible, as green iguanas have been shown to reveal a greater response to painful stimuli when the observer is not visible (Fleming and Robertson, 2012). Signs of pain should be considered similar to those of mammalian patients, such as hunched posture, guarding of the affected area, excessive scratching, foot or tail flicking, exaggerated flight response or poor appetite (Mosley, 2011), as well as specific behaviours such as withdrawing into their shell.

The body temperature of a reptile plays an important role in drug absorption, as does anatomic variations between species (Mosley, 2011). Reptiles should always be at their preferred optimum temperature zone when drugs are administered to ensure maximal absorption. It is recommended that drug administration into the caudal body of reptiles is avoided, as concerns have been raised due to renal first-pass effects and potential nephrotoxicity. Whilst this is not consistent between species (Holz et al., 1997), it is best to avoid administration of potentially nephrotoxic drugs, such as NSAIDs, into the tail and hindlimbs of reptiles.

Pharmacokinetic data for NSAIDs in reptiles is poor and their efficacy has not been proven despite multiple studies (Perry and Nevarez, 2018). Non-selective COX inhibitors have been advocated as a study of eastern box turtles demonstrated COX-1 and COX-2 proteins are expressed within the turtle tissues (Royal et al., 2012).

Butorphanol has been shown to have little or no effect in red-eared sliders (Sladky et al., 2007), bearded dragons and corn snakes (Sladky et al., 2008), but these same studies demonstrated antinociceptive effects of morphine in red-eared sliders and bearded dragons. Buprenorphine has been shown to not be efficacious in green iguanas (Greenacre et al., 2006) and red-eared sliders (Mans et al., 2012). However, the study by Mans et al. showed that hydromorphone was efficacious, indicating that pure µ receptor agonists should be used for analgesia in reptiles.

Tramadol has been shown to increase TWT when administered orally and subcutaneously in red-eared sliders (Baker et al., 2011) and intramuscularly in yellow-bellied sliders (Giorigi et al., 2015), indicating it is useful for analgesia and likely a good choice for outpatient analgesia for long-term patients such as those suffering thermal burns.

Use of local anaesthesia is in its early stages in reptile medicine but is being used in clinical practice with success. Intrathecal lignocaine, bupivacaine and morphine have been shown to successfully block motor function of the cloacal sphincter and hindlimbs as well as provide analgesia to the hindlimbs for up to 48 hours (Mans et al., 2011). Toxicity can be avoided by following the known toxic doses of local anaesthetics in mammals (Mosley, 2011).
Managing cutaneous vasculitis

History and clinical signs are essential for a definitive diagnosis of vasculitis, as well as determining a treatment plan

Cutaneous vasculitis is a term which describes inflammation of the blood vessel wall in the dermis and the subcutis, and, as such, is not a diagnosis but a cutaneous reaction pattern that can result from multiple aetiologies. Damage to the blood vessel wall and impaired blood flow result in oxygen and nutrient deprivation in the surrounding tissue, leading to hypoxia and necrosis. It has different classifications depending on the size of the vessels, type of inflammatory cells involved (neutrophils, eosinophils, lymphocytes) and on the aetiology.

Pathogenesis

Vasculitis can be immunological, eosinophilic, non-immunological or idiopathic.

Immunological vasculitis involves the deposition of immune complexes from type III hypersensitivity responses in the blood vessel walls. This in turn activates the complement cascade and recruitment of inflammatory cells to the area. Drugs, vaccines, infectious agents, food additives and neoplasia can trigger the type III hypersensitivity response.

Eosinophilic vasculitis is associated with type I hypersensitivity response and is seen in arthropod bite lesions.

Non-immunological vasculitis occurs when the endothelial cells are damaged by burns, trauma or physical blockage of blood vessels affecting the haemodynamics of blood flow.

In dogs, several breed predisposed entities of idiopathic vasculitis are recognised, where the patho-mechanism is not fully understood.

They include:

- Idiopathic vasculitis of Jack Russell Terriers
- Post-vaccine ischaemic dermatopathy in Poodles, Yorkshire Terriers, Pekingese and Maltese Terriers
- Familial vasculopathy of German Shepherd Dogs
- Idiopathic cutaneous and renal glomerular vasculopathy of Greyhounds

Clinical signs

The signs vary depending on the chronicity of the lesions. Early signs such as petechiae, ecchymosis, purpura and oedema are seen. Many cases seen in practice are those that show scaling, alopecia, crusting, hyperpigmentation, erosions, ulcerations and scarring. The lesions are usually painful and usually seen on pads (Figure 1), nose, tip of...
Managing cutaneous vasculitis

The treatment should be individualised depending on the extent of the lesions.

Tail (Figure 2), pinnae (Figure 3) and mucosal areas, where small blood vessels are most likely to be affected. Systemic signs such as fever, lethargy, anorexia, joint pain and lymphadenopathy are also seen, depending on the organ affected.

**Diagnosis**

History and clinical signs are important in reaching a diagnosis. A complete drug and vaccination history is required to arrive at a conclusive diagnosis. Lesions associated with drug reactions tend to develop only after some weeks (up to six months) following the administration of the drug or vaccination. In cases where infectious disease is suspected, appropriate tests should be performed to identify the cause. The diagnosis of vasculitis relies on demonstration of inflammatory cells targeting the blood vessel wall. In many biopsies this is not evident, because of inadequate sample size, inappropriate site selection, timing of the biopsies and secondary infections. Sometimes several sections of the biopsy are required to make the diagnosis.

Where there is an underlying disease, the differential diagnosis depends on the extent of the varying clinical signs and the extent of the disease. Autoimmune diseases such as pemphigus vulgaris, erythema multiforme, toxic epidermal necrolysis, cutaneous epitheliotropic lymphoma and sterile panniculitis are among the many differentials.

**Prognosis and clinical management**

The prognosis varies, depending on the cause and any underlying condition, ranging from fair to guarded. Dogs which have a single episode may recover in a few weeks, whereas in others, especially in those with a genetic disposition, the lesions tend to wax and wane.

There is no single universal drug for each condition, but there are a range of drugs with immunomodulating properties that can be employed.

For vasculitis, glucocorticoids, ciclosporin, pentoxifylline and azathioprine are used either individually or in combination depending on the individual case (Table 1). For localised lesions, topical treatments such as 0.1% tacrolimus, or betamethasone, can be beneficial. Vitamin E has antioxidant properties and is used as an adjunctive therapy. Surgery can be considered for some cases of vasculitis (ie necrotic ear tips and nasal arteritis of the nasal philtrum).

**TABLE (1)** Systemic drugs useful in clinical management of vasculitis

<table>
<thead>
<tr>
<th>DRUG</th>
<th>DOSAGE</th>
<th>COMMON ADVERSE EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREDNISOLONE</td>
<td>2 to 4mg/kg q24 hours for induction phase and then tapered very slowly</td>
<td>Polyuria, polyphagia, polydipsia, hepatomegaly</td>
</tr>
<tr>
<td>AZATHIOPRINE (NOT RECOMMENDED FOR USE IN CATS)</td>
<td>2mg/kg orally q24 hours</td>
<td>Anaemia, leucopenia and liver damage</td>
</tr>
<tr>
<td>CICLOSPORIN</td>
<td>5 to 7.5mg/kg SID</td>
<td>GIT disturbances, gingival hyperplasia, papillomatosis</td>
</tr>
<tr>
<td>PENTOXIFYLLINE</td>
<td>20 to 40mg/kg q8 to 12 hours</td>
<td>GIT irritation</td>
</tr>
<tr>
<td>TOPICAL GLUCOCORTICOIDS SUCH AS BETAMETHASONE AND FUSIDIC ACID CONTAINING GEL</td>
<td>Applied once or twice daily</td>
<td>Cutaneous atrophy</td>
</tr>
<tr>
<td>TACROLIMUS OINTMENT</td>
<td>Applied twice daily</td>
<td>Irritation on application</td>
</tr>
</tbody>
</table>

The treatment should be individualised depending on the extent of the lesions, the adverse effects of the drugs and financial constraints. For example, if the owner has limited funds one should refrain from offering azathioprine, because of the cost of the haematology and biochemical parameters that should be monitored every two weeks in the initial stages and, once stable, every two to three months. For localised lesions, topical treatment can be used to successfully manage some of the diseases. For diseases with widespread ulceration and systemic involvement, hospitalisation and supportive treatment and wound management are necessary.

**Summary**

- Vasculitis is a cutaneous reaction pattern, resulting from inflammation of the blood vessel wall in the dermis and the subcutis.
- The causes can be immunological, eosinophilic, non-immunological or idiopathic in nature.
- The definitive diagnosis of vasculitis relies mainly on history and clinical signs supported by histopathology.
- There is no single universal drug for each condition, but there are a range of drugs with immunomodulating properties that can be employed (Table 1).
- The prognosis ranges from fair to guarded, depending on the cause and any underlying condition.
Using topical products as part of a multimodal treatment plan for skin diseases

Topical therapy can be a very helpful aid when managing allergic, infectious and seborrhoeic disorders

Skin disease is one of the most common reasons owners bring their pet to see the vet (Nielsen et al., 2014). These conditions can be frustrating for both owner and vet to get to the bottom of but very rewarding when managed correctly. For management to be successful, accurate diagnosis and client compliance play important parts. Determining the cause of the issue is also important to minimise the risk of recurrence and flare-ups. Veterinary practices are lucky to have an array of parenteral medications to help relieve clinical signs like pruritus and inflammation, but for long-term success it is essential to support and maintain the skin barrier. This is done with topical therapy.

The skin is the largest organ of the body. It regulates temperature, provides a barrier against the environment and it keeps moisture in, keeping the skin hydrated.

It can be divided into three barriers: mechanical, immunological and microbiological. To minimise the risk of skin disease developing or flaring up it is important to maintain the health of these three barriers. This is done by incorporating topical products with restorative properties into the treatment plan. Topical therapy is very important when managing allergic, infectious and seborrhoeic disorders (Banović and Lemo, 2019).

**Atopic dermatitis**

Atopic dermatitis (AD) is a common disease in dogs. It is an inflammatory and pruritic disease with a variety of clinical presentations that can resemble other disease processes. This can make it a difficult disease to diagnose. Diagnosis is based on meeting the clinical criteria for the disease and ruling out other possible causes with similar clinical signs. It is worth noting that allergy testing is not considered a diagnostic tool for atopic dermatitis but can be done once a diagnosis has been made to identify potential causative allergens for the inclusion in allergen-specific immunotherapy (Hensel et al., 2015).

Dogs with AD have an impaired skin barrier with lower proportions of ceramides and cholesterol in the stratum corneum, widening of inter-corneocyte spaces and abnormal filaggrin production (Lam, 2012) leading to dry and more permeable skin and making it more susceptible to external allergens. They have also been shown to have disturbances in their microbiota. This dysbiosis can lead to bacterial or fungal overgrowth that may favour or enhance atopic flares (Gatelet et al., 2020). It is therefore important to include topical therapies in our AD management plan (Figure 1). Topical products will have a soothing effect on the skin, can help rebuild and maintain the skin barrier and rebalance the microbial flora as well as having the potential to reduce flare-ups. Topical therapies should therefore always be part of the multimodal treatment plan for patients with AD.

**Pyoderma**

Pyoderma has been traditionally divided into three types depending on the depth of infection: surface, superficial and deep. In surface pyodermas there is overgrowth of bacteria on the surface of the skin, for example hot spots. In superficial pyodermas the microorganisms have penetrated the skin, but the infection doesn’t extend past the basement membrane, for example folliculitis. Deep pyoderma are those infections that penetrate below the basement membrane, such as furunculosis or cellulitis. Treatment of pyoderma differs depending on the type present.
Diagnosis of pyoderma should always include cytology to determine what type of organisms (bacteria, yeasts, etc.) are involved in the infection. This will give you an indication of what you are dealing with and what treatment to use. Oral antibiotics are not always required when treating pyoderma but if indicated, cytology should be followed up with culture and sensitivity testing to determine the most appropriate antibiotic to use.

Surface pyoderma should never be treated with oral antibiotics but can be managed solely with topical treatment containing an antiseptic agent (Figure 2). Most cases of superficial pyoderma can also be managed successfully with just topical treatment, without the need for oral antibiotics (Jasmin, 2003; Müller, 2012; Borio et al., 2015).

For treatment of deep pyoderma, topical therapies play an important role but need to be accompanied by oral antibiotics. This should be based on culture and sensitivity testing. While waiting for culture and sensitivity results to come back, topical therapies can be used. This will avoid the use of an inappropriate antibiotic, save the client money and also soothe the pet’s skin. In cases of recurrent pyoderma, an underlying cause needs to be investigated and treated.

The use of topical therapies can help reduce the occurrence of resistant bacteria. Chlorhexidine digluconate has been shown to be effective against both sensitive and multi-drug resistant Staphylococcus pseudintermedius and it has been suggested that it is at least as effective as amoxicillin-clavulinate against this organism (Borio, 2015). Chlorhexidine digluconate at 2 to 4 percent concentrations have also been shown to provide residual antibacterial activity on canine skin for at least 10 days (Mesman et al., 2016).

Seborrhea

Seborrhea can be either primary or secondary in origin. Primary disorders are usually due to a genetic defect that disrupts the normal keratinisation process causing excessive scaling, whereas for secondary seborrhea the excessive scaling is caused by an underlying disease. Secondary disorders are most common and account for about 80 percent of cases (Barnard, 2015). For treatment to be successful, it is therefore essential to identify and treat, or rule out, any underlying disease (Mauldin, 2013).

Topical therapy is the mainstay of treatment for keratinisation disorders. Treatment goals include scale and crust removal, and oil, pruritus and inflammation reduction. Some topical therapies, such as tar, can be harsh on the skin so try to avoid these and use moisturising therapies to protect the skin barrier. Topical therapies for seborrhoeic disorders include keratolytic (remove scales and reduce adhesion of keratinocytes) or keratoplastic (normalise keratinisation) ingredients as well as moisturisers and emollients to protect the skin barrier, and topical antimicrobials for the management of secondary infections.

Treatment should be tailored to each individual patient and compliance is essential for success (Mauldin, 2013; Barnard, 2015). Therefore, selecting a topical formulation that will suit the owner is of importance. Shampooing the dog or cat is important to get rid of crusts and scales. This can be followed up by mousse applications or using the mousse in between baths. Spot-ons can also be beneficial in restoring the skin barrier function (Figure 3).

Topical therapy and owner compliance

Topical therapies come in different formulations (eg shampoos, mousses, pads or spot-ons) and choosing the right type can help with client compliance. Bathing the dog or cat is important in order to get rid of allergens and crusts from the skin and it should ideally be done at least once at the start of the treatment. Not all dogs or cats like to be bathed or the owner might not be physically able to get their pet into the bath or shower, so in these cases a mousse may be a more appropriate option.

Ophytrium

Ophytrium is a natural ingredient extracted from the root of the Ophiopogon japonicus plant. It has been shown to reduce the intensity and frequency of flare-ups of atopic dermatitis in humans as well as improving quality of life for patients with this condition (Mainzer et al., 2019). Through innovative in vitro human and canine skin models beneficial effects have been demonstrated on the three skin barriers. It has been shown to strengthen the mechanical skin barrier, limit adhesion of S. pseudintermedius to the canine skin and reduce irritation (Ollivier et al., 2019).
Investigating haematuria

Urinalysis and routine blood tests play a crucial role in the investigation of haematuria and very frequently have to be followed up with diagnostic imaging.

Haematuria is the result of blood loss from either the urinary or the reproductive tract and is often suspected when the urine has a pink-tinged, red or dark-red to brown colour.

Gross haematuria is visible to the naked eye and this means that there are usually over 2,500 red blood cells (RBCs)/μl of urine or around 150 RBCs per high power field (hpf) on microscopic examination. Occult or microscopic haematuria is present when red blood cells are confirmed on microscopic examination of the sediment despite the urine not looking discoloured.

The blood/haemoglobin pad on urine dipsticks detects RBCs, haemoglobin and myoglobin. Occasionally, drugs and chemicals, such as bleach or hydrogen peroxide, may lead to false positive results with the urine dipstick. It is important to differentiate haematuria from other causes of urine discoloration such as haemoglobinuria or myoglobinuria (Figure 1). In cases of haematuria, if the urine is centrifuged the RBCs will form a pellet at the bottom of the tube and the supernatant will be clear. In cases of haemoglobinuria (Figure 2) the urine supernatant will remain red or pink tinged and the plasma/serum of a spun blood sample should be examined for haemoglobinaemia (pink discoloration). Myoglobinuria is the result of marked muscle trauma or severe ischaemia (e.g. feline arterial thromboembolism) and causes a browny-red discoloration of the urine. However, in these cases the plasma is not grossly discoloured. Assessment of serum levels of creatine kinase (CK) might also be of help and would be expected to be markedly elevated in patients with myoglobinuria.

Investigation of haematuria should always start with a thorough history and physical examination. When history taking it is important, in addition to the standard questions, to ask questions specifically directed at the urinary tract/reproductive tract which include:

- Presence of bleeding/haemorrhagic discharge independent of micturition (more commonly associated with problems of the reproductive tract, including prostate, and distal urethra)
- Presence of change in micturition (e.g. dysuria, pollakiuria or inappropriate urination)
- Behaviour and environmental changes (this is especially important in cases of feline urinary tract disease)
- Presence of polyuria/polydipsia
- Timing of last season in entire females
- Presence of vulvar or preputial discharge
- Patient licking penis or vulva more than normal

A detailed physical examination should be performed with special emphasis on trying to identify evidence of petechiation, ecchymoses or haematomas, which might suggest a systemic bleeding tendency. Additionally, a rectal examination should be performed to assess the prostate in

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**SUSANA SILVA**

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**FIGURE (1)** How to differentiate haematuria from haemoglobinuria and myoglobinuria

- Red urine and/or positive on dipstick for blood/haemoglobin
  - Centrifuge the urine
    - Red pellet and clear supernatant
      - Confirm RBCs in sediment
        - Haematuria
          - Centrifuge blood sample +/- assess creatine kinase
            - Serum/plasma red
              - YES
                - Haemoglobinuria
              - NO
                - Serum plasma/clear
                  - Myoglobinuria
            - NO
              - Haemoglobinuria
        - Haemoglobinuria vs myoglobinuria
          - Centrifuge blood sample +/- assess creatine kinase
            - Serum/plasma red
              - YES
                - Haemoglobinuria
              - NO
                - Serum plasma/clear
                  - Myoglobinuria
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males (regardless of neuter status) and to assess the urethra and the iliac lymph nodes in both sexes. The prepuce should be carefully examined and retracted to assess the penis. The vulva should also be evaluated using a combination of visual assessment and palpation with a gloved finger.

The most frequent approach when investigating haematuria is to combine the possible differential diagnoses (Box 1) – alongside the potential anatomical location of lesion – with the knowledge of the most common causes of haematuria. When signs of lower urinary tract disease are present (eg pollakiuria or dysuria) alongside haematuria it is more likely that the source of the bleeding is located in the lower urinary tract rather than the upper urinary tract.

In the investigation of haematuria, it is logical to perform a minimum database, which includes haematology with smear, biochemistry with electrolytes and complete urinalysis with sediment examination (Box 2). Haematology will identify the potential presence and severity of thrombocytopenia and, if the haematuria is marked, assess the presence/severity of anaemia and appropriateness

**COAGULOPATHY**
- Thrombocytopenia *
- Problems with secondary haemostasis
- Platelet dysfunction
- Vasculitis

**URINARY TRACT**
- Kidneys/ureters
  - Neoplasia *
  - Nephro/ureterolithiasis *
  - Idiopathic renal haematuria
  - Trauma
- Bladder
  - Urinary tract infection *
  - Urolithiasis *
  - Neoplasia *
  - Feline idiopathic cystitis *
  - Sterile haemorrhagic cystitis (cyclophosphamide)
  - Trauma
  - Iatrogenic *
- Urethra
  - Neoplasia *
  - Granulomatous urethritis

**REPRODUCTIVE TRACT**
- Prostate
  - Prostatitis (acute or chronic) *
  - Benign prostatic hyperplasia *
  - Neoplasia *
  - Abscess/cyst *
- Prepuce/penis
  - Trauma
  - Neoplasia
- Uterus/vagina/vulva
  - Pyometra *
  - Metritis
  - Foreign body
  - Neoplasia
  - Oestrus *
  - Trauma

**BOX (1)** Differential diagnoses for haematuria using an anatomical approach *(NB The list of examples is not exhaustive; the most common are marked with *)

**BOX (2)** Important considerations when interpreting urinalysis findings

The presence of white blood cells in the sediment (+/- bacteria) is not synonymous with a bacterial urinary tract infection. A cystocentesis sample should be collected and submitted for culture and sensitivity to confirm bacterial infection, identify the infectious agent and select the appropriate antibiotic for treatment.

A significant number of bacteria have to present in the urine (at least 10,000 bacilli/ml or 100,000 cocci/ml) to be detectable by light microscopy. Urine cytology (stained) is a more sensitive and more specific method to detect bacteria and also allows better assessment of their morphology.

The clinical significance of crystalluria has to be interpreted on a case-by-case basis and it should be taken into account that it may be an incidental finding in some animals. A fresh, non-refrigerated sample should be analysed (ideally within 1 hour of collection or being voided) as crystals can precipitate in urine ex vivo due to factors such as refrigeration and prolonged storage.

**FIGURE (2)** Extremely dark urine (port-wine coloured) associated with severe haemoglobinuria (left) from a patient that presented for investigation of lethargy and marked urine discoloration that was initially suspected by the owner to be blood. The sample on the right side is from a normal healthy patient and is depicted for comparison only.
of regeneration. Inflammatory leukograms might indicate infection or inflammation. Biochemistry can help direct further investigations and evaluate the presence of concurrent disease that might need addressing, particularly assessing urea, creatinine and SDMA in case of concurrent upper urinary tract involvement. Microscopic examination of the urine sediment is useful to help identify the presence of RBCs in the sediment, confirming therefore the presence of true haematuria. In the sediment, it also important to look for evidence of inflammation (presence of white blood cells – WBCs), crystals, casts, bacteria and epithelial cells, which can help narrow down the differential diagnoses. More in-depth evaluation of epithelial cell morphology can be performed with urine cytology.

If there is suspicion of a bacterial urinary tract infection upon examination of the urinary sediment, it is worthwhile keeping in mind that gross haematuria is not a frequent prominent feature and that, if a bacterial infection is present, it could be a secondary problem rather than the inciting cause. Provided there are no contraindications, such as coagulopathy, a cystocentesis sample should be collected for culture and sensitivity and, ideally, this should be coupled with imaging to look for a primary cause of the haematuria. In some cases, it may be of help to compare the results of urinalysis of a voided sample with those of a sample obtained via cystocentesis. If haematuria is only present in the voided sample, bleeding from the genital tract (including prostate) and distal urethra would be most likely.

Iatrogenic haematuria (usually microscopic) associated with cystocentesis is a common finding even when the clinician does not perceive it as having occurred macroscopically (eg seeing a trickle of blood in either the hub of the needle or when the urine is being aspirated into the syringe). A period of 24 hours should be allowed before collecting another sample via free catch or another cystocentesis to confirm that haematuria was likely iatrogenic.

The most common systemic cause of bleeding from the urinary tract is severe thrombocytopenia (Figure 3). Disturbances of secondary haemostasis (prolonged PT and/or APTT) are an uncommon cause of mucosal bleeding such as haematuria, especially if this is the only clinical feature. Other problems such as platelet dysfunction are rare and would not be expected to commonly lead to haematuria.

Imaging is frequently used in the investigation of haematuria and, if there are concurrent signs of lower urinary tract disease, it is often performed early on in the investigative process.

Plain radiography can help identify radiodense uroliths and highlight large masses, but is frequently not a very sensitive tool if used alone when investigating haematuria. The addition of contrast studies (positive and/or negative) to standard radiography can help increase the likelihood of finding the underlying cause of haematuria; however, ultrasound is widely available and has, in most instances, replaced it. Nevertheless, experience and adequate equipment is needed to allow reliable interpretation of the results with either technique.

Ultrasonographic evaluation (Figure 4) of the intra-abdominal and intra-pelvic portion of the reproductive and urinary tract can be performed routinely, but assessment of the most distal part of the urethra is not possible. If the underlying problem is not identified with ultrasound alone the addition of contrast radiography, CT scan or alternatively cystoscopy should be considered.

Computed tomography is more widely available in some primary care practices and can be used in the investigation of haematuria, often after ultrasonography.

In most cases, imaging allows identification of lesions, which subsequently significantly narrows down the differential diagnoses based on its anatomical location. It becomes then easier to create a plan of diagnostic tests, possible therapeutic options and potential outcomes. However, at times, no lesions are identified on imaging regardless of operator experience, and this can also be helpful, as some conditions such as feline idiopathic cystitis are made more likely in this setting.

Bleeding from the prostate can be marked with benign prostatic hyperplasia. If, in an entire male, no other cause can be identified upon investigation, a pragmatic approach would be to consider castration (surgical or chemical) and monitor clinical response in the subsequent four to six weeks.

In summary

When investigating haematuria, it is paramount to start with a detailed history and complete physical examination to identify problems that may help direct the subsequent steps. Urinalysis and routine blood tests play a crucial role in the investigation and very frequently have to be followed up with diagnostic imaging.
Nail pathologies

Broken nails are common but it is another matter when all the feet are involved and nails start falling out

The second case involved a four-year-old neutered female lurcher. When she went acutely lame on her left hind paw, it was decided to amputate a dew claw and send this for histology as the site of interest was the nailbed itself. This gave the diagnosis of mild to moderate lymphoplasmacytic onychitis which was chronic and multifocal. This inflammation of the nail bed leads to onychomadesis, loss of the nail. In this case there were small lymphocytes with fewer neutrophils and plasma cells, and some melanin-laden macrophages which indicated damage to the stratum basale and basement membrane of the epidermis. The nailbed epithelium was ulcerated and there was perivascular inflammatory infiltrate in the adjacent superficial dermis. There was some new bone formation in the bone of the distal phalanx and basement membrane of the epidermis. The nailbed pathology proved to be a “bed of nails” in its impact on the patient’s well-being in both these cases.

Once her wound had healed. After the first week, this was reduced to 1mg/kg per day and this was continued for the next three weeks, then 1mg/kg twice weekly. She has a hypoallergenic diet, and essential fatty acid supplementation, doxycycline, niacinamide and pentoxifylline. The lurcher was put on prednisolone at 2mg/kg per day once her wound had healed. After the first week, this was reduced to 1mg/kg per day and this was continued for the next three weeks, then 1mg/kg twice weekly. She has a hypoallergenic diet, and essential fatty acid and biotin 2.5mg/day supplementation. Her nails are not the best but her claws reach down to ground level now and she shows no signs of discomfort. She has been on this regime for the last year and it is likely that she will stay on it in the future.

Nailbed pathology proved to be a “bed of nails” in its impact on the patient’s well-being in both these cases.
When presented with a skin mass, one of the main concerns is to rule out a possible mast cell tumour. If a mast cell tumour is present, then it is helpful to find out whether it is cutaneous or subcutaneous and to grade it in order to get prognostic information and help with further therapy.

The easiest and least invasive way of doing this is to take a fine-needle aspirate. Most mast cell tumours are easily recognised on fine needle aspirates; however, a few aggressive, poorly granulated tumours require biopsy. Two or three smears are useful. Try not to push the needle through the mass as this can implant neoplastic mast cells into deeper tissue.

Fine-needle aspirates can determine if a mast cell tumour is present and some recent literature has assisted in trying to grade fine-needle aspirates; however, histology is still the most useful method of grading.

For small tumours, an excisional biopsy is best. This can grade the tumour and identify margins. Incisional biopsies can be useful for grading but cannot determine the degree of infiltration by the tumour and may produce samples which are largely haemorrhagic or necrotic.

Mast cell tumours can also cause significant fibroplasia with most of the lesion demonstrating dense fibrous connective tissue with relatively few mast cells. This is a complication of both fine-needle aspirates (which do not produce a good yield of cells in these cases) and incisional biopsies.

Mast cell tumours can also contain large apocrine gland cysts. If the cysts rupture, there can be extensive surrounding inflammation. Inflammation is also a complication of ulcerated mast cell tumours and can complicate impression smears.

Mast cell tumours can be graded using two grading systems: the Kiupel (two tier) and the older Patnaik (three tier) grading systems. For the time being, pathologists like to grade using both grading systems. For Kiupel low-grade, Patnaik grade 1 tumours and Kiupel high-grade, Patnaik grade 3 tumours this provides clear and useful information about prognosis and treatment options. For those tumours that fall between classic low and high grade (Patnaik grade 2 tumours) the outlook is less clear. To assist with these tumours, we can use immunohistochemical prognostic markers Ki67 and c-kit to assist with prognosis and forward planning for therapy.

Both the Patnaik and newer Kiupel grading systems for cutaneous mast cell tumours do not apply to deeper subcutaneous tumours. Most subcutaneous mast cell tumours have a favourable prognosis and show extended survival times with low rates of recurrence and metastasis. The mitotic index (the number of mitotic figures per 10 high-power fields), infiltrative growth patterns and presence of multinucleate cells indicate a poorer prognosis.
Local anaesthesia in small animal practice

Locoregional anaesthesia can prove to be a valuable tool for both intraoperative and post-operative analgesia. Alongside the obvious advantages in patient comfort and care, locoregional anaesthesia has also been shown to have beneficial cost implications (Warrit et al., 2019). The more advanced the technique, the higher the level of skill required and the cost of equipment. Although the cost of performing these techniques means the total cost of anaesthesia may be higher, the reduction in post-operative systemic drug administration means overall costs are low. This may have a beneficial financial impact when procedures are done at set price and costs to the practice are lowered. The average lifespan of the equipment required for more advanced techniques is between 6 and 10 years, with the cost per case to recoup the initial investment being estimated as less than £25.

Locoregional anaesthesia doesn’t need to be complicated and can be incorporated into everyday practice relatively easily. The most basic of techniques involve infiltration of local anaesthetic into the tissues around the surgical site, but this can be used to great effect in even the most delicate and advanced of surgeries. The infiltration of bupivacaine into the epaxial muscles has been shown to reduce the requirement of intraoperative and post-operative opioid in dogs.

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The utilisation of locoregional anaesthesia techniques has dual benefits: it provides total anaesthesia to the area undergoing surgery and therefore reduces the depth of inhalational anaesthesia needed, and also reduces systemic analgesic requirements post-operatively. You should therefore see a reduction in both intraoperative and post-operative side effects of anaesthesia, with hypotension, hypoventilation, sedation and bradycardia as prime examples.
undergoing thoracolumbar hemilaminectomy (McFadzean et al., 2019), despite the infiltration being no more complex than an intramuscular injection. In dogs, pre-emptive incisional infiltration with bupivacaine during celiotomy has been found to reduce pain scores and opioid consumption in the post-operative period (Savvas et al., 2008). Other simple to perform techniques with a low cost and high patient benefit are the infiltration of local anaesthetic into the testes and spermatic cord prior to castration and intraperitoneal splash block of local anaesthetic following ovariohysterectomy. The use of lidocaine block prior to castration has been shown to reduce inhalational agent requirement and responsiveness of the patient during castration (McMillan et al., 2012; Huuskonen et al., 2013), with intraperitoneal splash blocks being effective after both open and laparoscopic ovariohysterectomy (Campagnol et al., 2012; Kim et al., 2012).

Equine and farm clinicians will be familiar with needle positioning based upon anatomical landmarks and this approach can be used to achieve a variety of local blocks in small animal practice too. The efficacy of local anaesthesia when performing dental procedures makes learning these blocks a must for anyone undertaking dentistry on a routine basis. All of the nerve blocks to desensitise the mandible and maxilla can be learnt and performed using anatomical landmarks only. Multiple options for the maxillary nerve block have been reported, with the introduction of a catheter caudally via the infraorbital canal being reported as an easy technique to learn (Viscasillas et al., 2013). A more advanced technique involves the introduction of a needle percutaneously below the zygomatic arch with resultant deposition of local anaesthetic in the pterygoid palatine fossa. This technique has the benefit of more caudal desensitisation of the nerve and should result in a more complete block. The mandibular nerve can be desensitised by introducing a needle perpendicular to the skin from the ventral aspect of the jaw, rostral to the angular process, and advanced until it is in close proximity to the nerve which is identified by palpation in the oral cavity. Once practised these nerve blocks are quick and easy to perform and can be utilised outside of dentistry for other procedures such as rhinoscopy and mandibular fracture repair.

The use of peripheral nerve stimulators (Figure 1) for nerve location comes with increased technical difficulty but should lead to improved results as local anaesthetic can be injected alongside the target nerve. Peripheral nerve stimulators use a low current over a short time period and should only stimulate motor and not sensory nerves; it is, however, advisable to perform these blocks in anaesthetised patients. A current of 1.0 to 2.0mA, with a frequency of 1 to 2Hz, delivered over 0.1 to 0.2 milliseconds is used initially to locate the nerve, with the operator looking for the appropriate motor response, for example stifle flexion when the sciatic nerve is stimulated. Once confident the correct nerve is being stimulated, the current is gradually reduced until the motor response disappears. If this is at a current below
Nerve stimulator guided blocks are particularly useful when anaesthesia of the limbs is required. The use of a femoral nerve block, via a pre-iliac approach (Figure 2), combined with a sciatic nerve block, will provide anaesthesia to the level of the proximal femur. In the forelimb a brachial plexus nerve block will desensitise the limb to the level of mid humerus, and a paravertebral block will reach as high as the shoulder joint (Lerche et al., 2016). It must be considered that innervation of skin dermatomes does not correspond with the deeper tissues and responses can sometimes be seen to skin incision and suturing despite anaesthesia sufficient to conduct surgery.

The highest level of accuracy is achieved by using ultrasound guidance to perform the block, but this also comes with the highest level of complexity. Ultrasound guidance allows visualisation of the deposition of local anaesthetic in close proximity to the target nerve. The accuracy of this technique means that lower volumes of local anaesthetic are required and thus the chance of systemic side effects such as sedation, nausea and cardiovascular disturbances are reduced. Another advantage is that a differential block may be achieved, meaning that despite total anaesthesia, movement of the limb may still be possible. This has the added advantage of animals being able to walk sooner after surgery.

All of the aforementioned blocks can be achieved with use of ultrasound guidance. An additional block that is fast to perform is the transverse abdominis plane (TAP) block. The TAP block provides anaesthesia to the abdominal cavity and can be used in surgeries as diverse as exploratory laparotomy and mammary mass removals (Figure 3). For the TAP block, the animal is in dorsal or lateral recumbency and the needle advanced until the tip is sitting in the fascial plane of the transverse abdominis muscle (Figure 4A). A small test injection will confirm correct placement as hydro-dissection of the muscle will be seen (Figure 4B). This block has become routine at many hospitals and can easily be implemented in primary care practices.

There are a wide range of techniques available to achieve local anaesthesia of almost all surgeries; once practised these nerve blocks are fast and easy to perform, have clinical benefits to the patient and can have financial benefits to the practice and owner.

References


Evaluation and treatment of horses with back pain

Back pain is commonly implicated by owners as a cause of poor performance but it is challenging to arrive at a secure diagnosis.

If there is a clinical suspicion of back pain, the first step is to work out whether it is primary or secondary to another orthopaedic problem such as hindlimb lameness.

**Diagnosis**

There is no single "gold standard" test for back pain. Intuitively, pain on palpation and bucking when ridden are the most frequent signs attributed to it, but horses with back pain may also present with reduced performance, poor transitions, making a poor bascule when jumping or refusing to jump, becoming disunited in canter, alongside a number of other nebulous signs. The author will always address any lameness first, as epaxial muscle pain secondary to lameness is common. Indeed, we know both fore- and hindlimb lameness affects thoracolumbar movement (Álvarez et al., 2007; Álvarez et al., 2008).

The same inertial measurement units ("sensors") used in gait analysis can be used to quantify back movement in both the non-ridden and ridden horse (Figure 1) (Martin et al., 2016; Guire et al., 2018). This allows both objective lame-ness and back movement evaluation concurrently.

A number of kinematic studies have been performed which have assessed the response of the back to pain. In a study of horses adjudged to have natural back pain, reduced flexion-extension movement at or near the thoracolumbar junction was observed (Wennerstrand et al., 2004). Recent studies have shown that the thoracolumbosacral range of motion increases after successful diagnostic analgesia of hind limb lameness (Greve et al., 2017) and body posture is more equal between lunging directions after successful diagnostic analgesia (Greve et al., 2018). This supports the clinical observation of the co-existence of lameness and back problems (Landman et al., 2004).

If lameness is not present or has resolved, measurable asymmetric back movement may indicate the presence of back pain. The problem with interpretation of this data is making the link between "active", relevant back pain and asymmetric movement or reduced range of motion. For the latter we have no reference to which we can compare back movement data. The author measures back movement before and after administration of phenylbutazone. Provided the horse is sound, any change in movement supports the existence of back pain.

If the horse has a reproducible clinical sign, diagnostic analgesia is the most reliable way of attributing pain to a region. Infiltration of local anaesthetic between impinging spinous processes is commonly used; the author injects 10ml either side of the affected sites under radiographic guidance. Ultrasound guidance can be used but the aim is to inject ventral to the site of bone remodelling (Figure 2). If the signs exhibited are too inconsistent, then medication of the suspicious sites with corticosteroids is an option. The author sees this as a diagnostic technique rather than providing a long-term cure.

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**ANDY FISKE-JACKSON**

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**FIGURE (1)** Inertial measurement units are used to measure back movement (A) as well as rider movement (B).

(2) Radiograph demonstrating insertion of needle ventral to site of bone remodelling.
Imaging

Radiographic assessment of the thoracolumbar spine should include latero-laterals for the spinous processes (Figure 3A) and latero-20° ventral-laterodorsal oblique projections for the articular process joints (APJs) (Figure 3B). Impinging spinous processes (ISP) have been found in 86 to 92 percent of racehorses at post-mortem and in 37 percent of normal horses, so their presence radiographically is not necessarily associated with thoracolumbar pain. Whilst a number of grading systems exist, the author believes the severity of impingement correlates poorly with the severity of clinical signs. Any remodelling or impingement of spinous processes should be considered a possible source of pain.

Osteoarthritis (OA) of the APJs is most commonly found between T15 and L1, and usually affects between two and five joints. Horses with OA of the APJs are more likely to have thoracolumbar back pain than horses with ISPs, and those with concurrent ISP and OA of the APJs are associated with the highest likelihood of pain. The presence of ventrospinalitis, discospondylitis and fractures should also be assessed.

Acquisition of high-quality ultrasound images of the thoracolumbar spine is now possible due to the continued development of ultrasound machines.

The following anatomical structures can be assessed depending on the probe used:

- **Linear probe (high frequency: 7.5 to 15MHz):**
  - Supraspinous ligament
  - Summits of the spinous processes
  - Thoracolumbar fascia

- **Convex probe (low frequency: 3 to 6MHz):**
  - Articular process (facet) joints
  - Lumbar transverse processes
  - Epaxial musculature

- **Rectal probe (5 to 7.5MHz):**
  - Lumbar vertebral bodies (L4 to L6)
  - Intervertebral discs (L4 to 5 and L5 to 6)
  - Lumbosacral joint
  - Sacroiliac joint

Lameness results in reduced ability to use the thoracolumbar epaxial muscles normally (Greve and Dyson, 2015). Saddle-slip to one side occurs in approximately half of horses with hindlimb lameness (Greve and Dyson, 2013; Greve and Dyson, 2014), which is likely due to asymmetric thoracolumbar movement and/or asymmetric epaxial muscling. Osseous spinal pathology has been shown to cause measurable left/right asymmetry in multifidus at, or close to, the level of pathology in thoroughbred racehorses (Stubbs et al., 2010) and ipsilateral to symptoms in humans with acute/subacute lower back pain (Hides et al., 1994). This suggests that measurement of cross-sectional area of multifidus using ultrasound (Figure 4) could provide an objective indication of the existence of back pathology.

**Treatment**

The aims of treatment are to alleviate pain and muscle spasm to allow muscle function and development, develop core muscle strength, improve flexibility and prevent recurrence.

Leo Jeffcott proposed the “bow and string” theory whereby the epaxial muscles – longissimus dorsi and multifidus – provide stability and locomotion and the abdominal muscles flex the back. Retraction of forelimbs and protraction of hindlimbs flex the spine (Van Weeren, 2009). Lowering the head tenses the nuchal ligament, cranially rotates thoracic vertebrae and flexes spine (Berner et al., 2012) whereas raising the head tenses the back. Rehabilitation should focus on flexing the spine (tensing the bow).

Back width increases in spring, in regular work and after a work session whereas it decreases in winter, with a heavy rider and in the presence of lameness (Greve and Dyson, 2014). Therefore, saddle fit should be checked several times a year and taking into consideration the above factors.

Large studies of back pain in people have found that strength/resistance and coordination/stabilisation exercise improves outcomes over other interventions (Searle et al., 2015), exercise improves pain relief and function compared to bed rest (Dahm et al., 2010) and stretching and strengthening results in the largest improvement over other exercise (Hayden et al., 2005).

The superficial longissimus dorsi spasm as it attempts to compensate for the loss of spinal stability (frequently evident on palpation). This is because it is poorly positioned to stabilise the spine. The deeper multifidus stabilises the spine and atrophy of this muscle results in micro-motion of the intervertebral joints thereby predisposing them to the development of degenerative joint disease. Therefore, therapeutic efforts should be made to build up multifidus muscle. One method is to perform dynamic mobilisation exercises (bailed stretches).

**BOX (1) An example of a non-ridden exercise programme**

*This should be altered according to the horse’s fitness and ability*

| Week 1 and 2 | 30 mins long reining at walk twice daily |
| Week 3       | 30 mins long reining at walk once daily. Lunging 20 minutes of which 5 mins each rein with training aid |
| Week 4       | As above but increase lunging to 30 mins with 10 mins each rein with training aid |
| Week 5       | As above but add trotting poles to lunging |
| Week 6       | As above but increase lunging to 40 mins |

*Note: before commencing any exercise programme, it is important to consult a veterinarian to ensure that the horse is fit and well.*
Whole body vibration (WBV) has been shown to increase multifidus cross-sectional area and reduce left-right asymmetry (Halsberghe et al., 2017). Water treadmill (at fetlock or tarsal level) increases T18 and L3 flexion (tensions the bow) (Nankervis et al., 2016).

Initial therapy for impinging spinous processes is usually conservative. Perilesional medication with corticosteroids is the author’s first line conservative treatment followed up with a robust six week programme (Box 1) of non-ridden exercise as we know that rider weight reduces back movement (Greve and Dyson, 2014; Martin et al., 2016).

Articular process joint OA treatment consists of intra/peri-synovial corticosteroids (injected under ultrasound guidance). Horses undergo a similar exercise programme (Box 1) as following ISP medication. Whilst medication of equine backs is common, systematic reviews of randomised controlled trials in human medicine show no strong evidence for or against the use of any type of injection “therapy” (Staal et al., 2009). Injection of articular process joints with corticosteroids/local anaesthetic results in a transient improvement in pain but not disability, and are no better than placebo treatments (Chou et al., 2015). Nevertheless, in horses the author finds these injections provide valuable pain relief for a variable period.

Concurrent phenylbutazone medication can be administered if required. RAMP registered physiotherapist visits should be arranged fortnightly alongside dynamic mobilisation exercises. On completion of the programme ridden exercise resumes.

Pitcher plant is reported to provide pain relief without motor weakness via neural blockade. No significant differences in the pain relief or duration of significant relief was seen in human facet joint injections (Manchikanti et al., 2004) and no significant local anaesthetic action has been demonstrated (Campos et al., 2013). However, there are many anecdotal reports of its benefit. Be aware it is only licensed for external use.

Extracorporeal shockwave therapy initiates neovascularisation and upregulation of angiogenetic growth factors (Wang, 2012). It has been shown to be useful for treatment of impinging spinous processes and OA of APJs (Allen et al., 2010). Probe position and correct depth are critical: 35mm probe abaxially for spinous processes and 80mm probe abaxially for articular process joints. One thousand pulses are delivered each side, horses are rested for two days and returned to work over five days.

Mesotherapy is used by many practitioners and consists of multiple intradermal injections with combinations of lignocaine/dexamethasone/saline. It is hypothesised to stimulate type I and II nerve fibres that block pain transmission within the same spinal segment – the gait theory. There is some evidence supporting its use: in humans it was reported to be as effective at treating acute lower back pain as NSAIDs (Constantino et al., 2011). It can be combined with shockwave and exercise (“SME” therapy) for horses with impinging spinous processes (Turner, 2011).

A small study investigated the use of electroacupuncture treatment of horses with signs of chronic thoracolumbar pain (Xie et al., 2005). After a third treatment thoracolumbar pain scores were significantly lower than baseline 14 days after treatment.

Surgery

Resection of impinging spinous processes (Figure 5) can be performed either standing or under general anaesthesia with success rates of 70 to 77 percent returning to work (Walmsley et al., 2002; Brink, 2014; Jacklin et al., 2014).

Interspinous ligament desmotomy (ISLD) was first described in 2012 (Coomer et al., 2012) with a remarkable 95 percent success rate. A recent study found that 53 percent of horses are at equivalent or higher level of performance three years post ISLD (Prisk and García-López, 2019).

In summary

The key to successful treatment of back pain is an accurate diagnosis and a diligent rehab regime combining pain relief (either medical or surgical), physiotherapy and a robust exercise regime activating the core stabilisation muscles.

A full reference list is available online.
**Anatomical changes related to Chiari-like malformation pain in CKC Spaniels**

Susan Knowler and others, University of Surrey, UK

Chiari-like malformation and syringomyelia are closely associated developmental abnormalities in Cavalier King Charles Spaniels. Diagnosis of this syndrome may be challenging because not all affected dogs have the same anatomical irregularities or show clinical signs of pain. The authors analysed data from magnetic resonance imaging of the head and neck in 66 affected dogs. Their findings showed that dogs with both Chiari-like malformation-associated pain and syringomyelia show changes in skull shape resulting in osseous insufficiency, rostral flattening and increased proximity of the hard and soft palate to the cranial base. These observations suggest that changes to the whole skull should be considered when identifying individuals suitable for use in breeding programmes, rather than basing the decisions on imaging of the hind brain alone.

*Journal of Veterinary Internal Medicine, 34*, 237-246

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**Anaesthesia and analgesia protocols used in routine spaying procedures in dogs and cats**

Carolyn Gates and others, Massey University, New Zealand

Both ovariectomy and ovariohysterectomy procedures may cause significant intra- and post-operative pain without appropriate management. The authors investigated the anaesthesia and analgesia protocols used by 472 New Zealand-based veterinarians. Their responses described 41 unique post-operative drug combinations used in canine ovariohysterectomies and 20 used with feline patients. The study highlights the need for further research on the safety and efficacy of different protocols to identify opportunities to improve animal welfare.

*Veterinary Anaesthesia and Analgesia, 47*, 38-46

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**Recommendations for intraperitoneal and incisional analgesia in small animals**

Paulo Steagall and others, University of Montreal, Canada

Intraperitoneal administration of local anaesthetics has been shown to reduce early post-operative analgesic requirements, time to first intervention analgesia and pain scores after abdominal surgery in humans. The authors, members of the World Small Animal Veterinary Association’s global pain council, summarise the evidence on the value of intraperitoneal and incisional anaesthesia in veterinary patients. They also offer guidance on the application of these methods in a wide range of abdominal surgery interventions.

*Journal of Small Animal Practice, 61*, 19-23

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**Wound and pain score parameters in cats undergoing flank or midline ovariectomy**

Matthew Swaffield and others, Royal Veterinary College, London

Ovariectomy in cats is one of the most common procedures performed in veterinary practice. Most UK practitioners appear to favour a flank laparotomy whereas a midline approach is preferred by most US practitioners. The authors compared perioperative pain and wound scores in 75 procedures performed by final year students using one or other technique. Examined up to 10 days post-operatively, cats treated using a flank technique had higher pain scores but swelling of the wound site was more commonly seen following the midline entry method.

*Journal of Feline Medicine and Surgery, 22*, 168-177

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**Topical wound anaesthesia to mitigate piglet castration pain**

Meredith Sheil and others, Animal Ethics Pty, Yarra Glen, Victoria

Piglet castration is a well-documented cause of acute pain and stress affecting millions of animals globally each year. The procedure is usually carried out without any form of analgesia. The authors investigate the efficacy and safety of a combination local anaesthetic and antiseptic formulation (Tri-Solfen: Animal Ethics) in controlling pain both during and after castration. Instilled into the wound immediately following skin incision, the product was effective in reducing motor and vocalisation responses for up to two hours following castration.

*Australian Veterinary Journal*

https://doi.org/10.1111/avj.12930

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We do like to think we make a difference, don’t we? The animal comes in ill, we treat it and most of the time it gets better. And there’s the rub... I was going to say “we cure it” but in reality, how much of that getting better is us and how much is biology resolving matters on its own? Or is it just down to the healing power of time?

I did have a period working on my own – vet, nurse and receptionist all rolled into one – in a lovely little town in the middle of Lincolnshire. No names, no pack drill as they used to say but the branch practice I worked in was at one end of the town and at the other end lived the other vet, Dr Mallard (a pseudonym you understand, but as that was 20 years ago I guess he is no longer with us). He must have been 80 and if you took your pet to him he would sit you down, give you a cup of tea and a slice of cake, chat to you about your animal and its problems – and yours too – and then stroke the pet and say “I’m sure everything will be fine... there’s no charge for that.” It gave him a purpose in his retirement and of course maybe about 80 percent of the animals were indeed “cured” by his kindly attention. The 20 percent which didn’t ended up at the door of the practice where I was working and ended up feeling cheated by the prices charged for my services, with the limited arsenal of drugs I had to use. Far fewer than 80 percent resolved under my care, but I like to try and persuade myself that Dr Mallard had creamed off the ones that were on the road to recovery as he petted them and waved them goodbye.

Zip on nearly a quarter of a century and I’m not sure that much has changed. Sure, we have a lot of new wonder drugs to use and new diagnoses. We used to say that elderly ponies with shaggy haircoat had Cushing’s disease and nothing much could be done, or indeed needed to be done. Now they’ve understood the aetiopathogenesis of the condition, renamed it PPID and have a dopamine agonist that solves the problem in up to 80 percent of cases. Interesting – we’re back to four out of five cases cured. Except that with Dr Mallard it was for free while this drug will set you back a fair whack considering you’ll be giving it for the lifetime of your horse.

The main difference is that there is a load of science behind PPID – a quick PubMed search yielded a little shy of a hundred papers on the condition – while there is next to nothing on animals that self-cure. Well, that’s not quite right. Truth be told, back in 1929, Dr Stoll was examining sheep infected with Haemonchus contortus and he found that a second larval challenge to infected animals resulted in a fall in egg production and expulsion of the parasitising worms. Self-cure he named it, and that was way before the development of today’s effective anti-parasiticides. But it’s not the same as pets naturally getting better on their own, is it?

What got me onto this topic in the first place? Well, in these COVID-19 times, there are genuine emergencies for sure. The perforated ulcer won’t generally heal itself (though never say never!) and the thorn stuck through the cornea works its way further in more often than it comes out without surgery. But a lot of other cases that I would have had in within an instant previously do seem to resolve well with some advice over the phone. Oh dear – here I am doing myself out of a job. Maybe I have something to learn from Dr Mallard after all!
COVID-19 and cattle vets

How is the current global pandemic affecting the work of cattle vets in the UK?

A

Guidelines to cattle vets are that they are entitled to visit animals in need of emergency treatment or urgent assessment, and to prevent further deterioration.

infection, the severe inflammation inside the lungs and the immune system being overwhelmed, it appears that clients are not always well informed and have welcomed the vet as educator. At the farm visit, Nikki comments that asking the farmer and stockmen to wear gloves has emphasised the need for real precautions. Fortunately, the length of a cow matches the requirements for social distancing. It is unlikely that the distance for viral projection was indicated to accommodate a veterinary surgeon at the blunt end of a cow and the farmer at the sharp end, but six feet and two metres does conveniently cover the dairy and beef breeds.

Nikki is part of the Hafren Veterinary Group. Many of the clients have been with the practice for years, if not generations, and it is helpful that the living arrangements and handling facilities on the farms are well known to the staff. This is particularly relevant when arranging a TB test. The rule is coronavirus safety first, TB second. It is understood that TB testers in other areas, who are not familiar with the farm, may have greater difficulty in establishing safe working. The BCVA office is in discussion with APHA to help overcome any obstacles. Currently, the vets within the practice are working four-day weeks and operating an out-of-hours rota. There are expected to be financial impacts on the practice and it is considered too early to make any predictions. The clients phoning the practice and collecting prescriptions from a box outside has not caused any difficulties and drug supply has not been interrupted. The principle is for clients not to enter the practice premises. Other practices are known to be operating a system where the farmer discusses the drug use with the vet, the order is placed and arrangements are made for collection. When the client enters the practice car park a telephone call is made to someone within and the drugs are taken out, social distance maintained.

Interestingly, the area managers for the pharmaceutical companies are finding that contact with practices is being maintained while working from home. Recognising that many practices are receiving a high call volume from clients, utilising e-mails and receiving calls from individuals is providing an efficient way of working. The whole area of multiple discussions about topics, with several people contributing, is being looked at as a way forward for contact between companies and practices, and between practices

RICHARD GARD
LARGE ANIMAL CORRESPONDENT

Following a 16-year apprenticeship with Beecham, Richard established a project management and development consultancy and writes regular contributions for the veterinary press.

A

at the time of writing, it is week two of the restrictions for cattle vets visiting farms. The prime minister has spent a second night on oxygen in intensive care, the initial three-week clampdown is expected to be extended and the modellers are indicating that the peak disease incidence is nearly upon us. Whether the peak will continue as a flat line on the chart or fall away rapidly is a topic for debate. By the time you read this, some of the outcomes will be known. The observations of veterinary surgeons may become very important, not only when there is analysis of development of the disease but possibly more rapidly as consideration is given to lifting restrictive practice.

The British Cattle Veterinary Association has issued members with a range of information that will enable them to manage the disease restrictions. Before visiting a farm, the vet is to contact the farmer to establish that safe working is able to be implemented. In order to appreciate the initial impact on farmers, vets and veterinary practices, I spoke with Nikki Hopkins, BCVA President, after the first few days of the new order.

Clearly each practice and area will be different and Nicki has a particular interest in beef herds and bulls. Many of her clients are in the older at-risk age range and they are not engaged with social media. Mobile phone coverage is patchy but swiping away at a small screen has just not become the norm. Nikki points out that a veterinary surgeon making contact, asking about the health of people at the farm and indicating that in order to visit precautions are needed for all to stay safe, results in a serious conversation about the virus.

Whereas many people will now be familiar with the idea of a viral aura and the low number of virus particles that cause

Guidelines to cattle vets are that they are entitled to visit animals in need of emergency treatment or urgent assessment, and to prevent further deterioration.

How is the current global pandemic affecting the work of cattle vets in the UK?
Veterinary practices are in an important position to be able to clarify the extent of COVID-19 on farms.

Of particular consideration is the TB situation. It was at this same time of year in 2001 when herds were being slaughtered for foot and mouth disease. The general election was postponed and the countryside was in turmoil. When the dust settled there was an increase in bovine TB and the lack of testing in 2001 was indicated as a relevant factor. This interpretation will be a consideration for the continuation of TB testing now. Veterinary surgeons that were involved during FMD may have a view whether the lack of testing did contribute to an increase in disease in their area or whether the slaughter, restocking and general disturbance to farming activity was too great to be sure. If COVID-19 is a rural disease then TB testing may need to be suspended.

Veterinary practices are in an important position to be able to clarify the extent of COVID-19 on farms. When the final assessment is written the BCVA may well be asked to contribute, but information from practices would be very valuable now. Are there cases of COVID-19 on the farms of your clients? The extent of the disease on farms could well influence the duration of the rural restrictions. Looking over the hedge, it would appear that farming activity is proceeding as expected. Engineers are visiting to maintain tractors and other machinery, activity is taking place in the fields and milk is being collected.
Nematodirus in springtime lambs

As the spring progresses and lambs are out at pasture, we must remain mindful of Nematodirus

Sheep vets will be all too familiar with the phone call from a distressed shepherd that has just found a number of his best lambs dead, which, on post-mortem examination, are found to have succumbed to Nematodirus. So how do we stay ahead of this challenge and advise our clients?

The key is to keep informed and gather as much information as you can. Information of a developing situation with Nematodirus can come from numerous sources. This information can be pieced together like a jigsaw to calculate the risk in your own geographical area. Information may come from NADIS Parasite Forecasts, SCOPS, local post-mortem laboratories, APHA, SRUC and, not forgetting, your own experience both in the current season and previous seasons.

The principle parasite involved in the UK is Nematodirus battus. The parasite has a different life cycle to other sheep worms which is highly dependent on certain climatic conditions (Figure 1). Unlike other roundworms, development of the infective larvae takes place within the egg which allows the larvae to survive from one season to the next and allows transmission from one lamb crop to the next. Hatching is triggered by a period of cold weather, followed by warmer temperatures over 10°C.

If the hatch of Nematodirus occurs over a short period of time, and the lambs are growing well and consuming large quantities of grass, the outcome can be devastating, with deaths and stunted lambs.

Intake of the larvae will typically lead to scour, which can progress to profuse diarrhoea and wasting. The lambs can become dehydrated and thirsty. The internal damage is caused by migrating larvae. Death can be rapid and prior to

JIM HOPKINS

Jim Hopkins, BVetMed, MRCVS, graduated from the RVC in 2005 and has worked at Steffan Veterinary Services in Lampeter since. He is Clinical Director and a large animal vet but has a keen interest in sheep.

www.scops.org.uk

Nematodirus life-cycle

Host stage 14 days

Eggs in dung

1st stage larvae develop in the eggs

2nd stage larvae develop in the eggs

3rd stage L3 larvae are infective. They migrate into the herbage and wait to be eaten by the sheep

Free-living stages (May take eight to nine months) Development slower and usually too cold before L3s are ready so they sit dormant until following spring

L4 worms mature and develop into adults

Adults lay eggs

FIGURE (1) Nematodirus parasites have a different life-cycle to other sheep worms. Thank you to SCOPS for allowing reproduction of the image.
www.scops.org.uk/internal-parasites/worms/nematodirus-in-lambs/
any rise in faecal egg count (FEC) so a "wait and see" policy is extremely risky. In my practice we send out warnings to farmers within our newsletters but also through social media, emails and text messages.

If farmers and their vet feel that the lambs are at high risk and the conditions are right, then SCOPS advise using a white (1-BZ) drench which is usually highly effective against this parasite and suitable for young lambs. Care must be taken to ensure correct dosing, good technique and accurate dosing by weighing lambs. Perform a FEC 7 to 10 days later to check that the treatment has been effective but also check for any other intestinal worms which may have survived the treatment.

It is worth noting that other roundworms can also be present in lambs in the early season, which can have very different resistance patterns to Nematodirus. While 1-BZ remains the treatment of choice for Nematodirus, all five groups of anthelmintic are effective. SCOPS produce a very good leaflet detailing many of the different brands which are available (Sustainable Control of Parasites in Sheep, 2020).

There are five groups of anthelmintics available and there are high levels of anthelmintic resistance to some of these in the UK. In Wales, it is estimated that 94 percent of flocks have resistance to 1-BZ, 68 percent to 2-LV and over 50 percent to 3-ML with reported resistance to 4-AD (Wales Against Antelmintic Resistance Development, 2015). However, note that the flip side of these figures, on 6 percent of farms 1-BZ can still be very effective against all the roundworms.

FEC is recommended throughout the grazing season to assess the levels of worms present and also assess the effectiveness of treatments.

Every flock should be testing the effectiveness of the different groups of anthelmintic to enable them to use them responsibly and maintain their effectiveness as long as possible. FEC is recommended throughout the grazing season to assess the levels of worms present and also assess the effectiveness of treatments. This can be used alongside growth rate information and any fall in growth rate should be investigated without delay.

The responsible use of wormers has been marketed and talked about for a long while but there is still a slow uptake by shepherds. Vets need to engage with farmers to ensure this and other messages are taken on board and actioned.

The first step to becoming engaged and trusted by your shepherds is to be proactive with warnings and key messages. Consider sending them out to all your sheep keepers in a format that they are going to see and read, and hopefully take heed of. Sheep farmers have traditionally been reluctant to engage with vets and rely much more on advisors and consultants.

If you want your practice and vets to succeed with sheep flocks, we need to make sure vets have the tools, knowledge and confidence to engage and discuss problems with shepherds. Then, armed with knowledge and confidence, go out and engage with them. In the current exceptional circumstances, this may not be the easiest task, but if vets have time at home or in the car there may be opportunities.

"We need to make sure vets have the tools, knowledge and confidence to engage and discuss problems with shepherds"

Sit down with the practice management software and make a list of sheep farms. Then make phone calls to some selected shepherds. Once lambing has finished, before the summer season gets into full swing, they may have time to review and discuss. Discussions can take place about the previous lambing, how did it go, were there any major problems or niggles which need addressing? There may be an opportunity to consider ovine abortions and vaccination regimes for the coming autumn. How much antibiotic was purchased from the practice compared with the number of ewes and lambs? There may be an opportunity to improve the health of the flock through reduced reliance on antibiotics or sorting out a problem to reduce the need for antibiotics. The list can be endless.

The late spring time is also a good time to discuss worming protocols for the coming season. Discuss any issues in the previous year, ask how the lambs grew and how quickly they reached slaughter weight. There may be a chance here to discuss and offer faecal egg counting and reduction tests.

These problems occur in many flocks and vets should be at the fore, making ourselves available to help ensure sustainable lamb supply for the future.

References
Navigating our way through uncharted waters during the COVID-19 crisis

Only time will tell what will happen once the pandemic subsides, but it is clear that things will look different.

At the time of writing, we have just gone through our first three-week period of “lockdown” following the COVID-19 pandemic hitting the UK. It has been a stressful and worrying time for the whole country and indeed the whole planet. There are many uncertainties and anxieties about where we are heading and what a post-COVID-19 world will look like. In the UK, we believe that we are close to the peak of the initial wave of infections, although only time will tell whether this is truly the case.

At all stages, BEVA has strived to keep its members updated on developments and issued specific guidance for equine vets about the types of work that they can and can’t consider doing safely. However, since we are dealing with a completely new and unprecedented situation, there have been significant challenges in achieving these goals.

We have needed to take heed of not only official government advice, but also the rapidly evolving scientific and medical knowledge about the virus and its epidemiology, as well as the opinions of our members and those of the veterinary profession as a whole. Furthermore, the needs of related industries, including the breeding and racing industries, have to be thrown into the mix. Coupled with the rapidly changing situation, these circumstances created a perfect storm scenario where any guidance was at risk of becoming rapidly outdated and open to denigration. In today’s world where social media influences many people’s lives and beliefs, the sudden flurry of posts by self-appointed experts added fuel to the fire of disquiet that existed at times.

We have worked closely with other veterinary associations and have been careful to align our advice with that of the RCVS. We hope that we have managed to maintain a sensible, pragmatic and, as far as possible, evidence-based course through these troubled waters.

Support for BEVA members extended well beyond guidance about working practices. With the cancellation of many of our practical CPD courses, we worked on increasing our online educational content for those in isolation and we offered free membership for three months. We also initiated resources to support those unable to work, including the “Furloughed Club”, a virtual opportunity for those affected by coronavirus to catch up and share experiences. Advice and support for horse owners was also developed, including a series of educational video clips, entitled “Don’t give your vet the virus”, on topics such as how to take a horse’s temperature, heart and respiratory rates, as well as mini webinars on common diseases such as laminitis and colic.

At the time of writing, we do not know how long the current restrictions will continue for. Neither do we know what impact the pandemic and the lockdown will have on the equine veterinary sector. We are facing an economic recession and this will undoubtedly affect some people’s ability to fund horse ownership and cover the costs of veterinary care. Following the economic crisis of 2008/2009, there was a demonstrable downturn in some equestrian activities and equine veterinary work, with a drop in the numbers of horses undergoing high-cost procedures such as colic surgery, for example. In addition, the introduction of new ways of working during the lockdown, such as increased use of telemedicine and remote prescribing, will likely have longer-term impacts on how we work.

BEVA has produced a collection of resources, including advice and support for horse owners during the pandemic, entitled “Don’t give your vet the virus”, which can be found on their website: beva.org.uk/dont-give-your-vet-the-virus
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In association with APHA
Equine hospital in lockdown

In the face of the coronavirus pandemic, veterinary practices across the world are having to adapt to new ways of working.

“As soon as we knew the country was facing a pandemic, the directors had a meeting to work out how we were going to protect our dedicated staff. When we built the hospital, we put in an internet-based system, so all the reception team picked up their telephones and computers and went home to work from there. We asked all the ambulatory vets to stay away from the hospital as much as possible and to practise social distancing. In the hospital we already had infection control measures in place, so it was just a matter of reinforcing them to the team.

“Initially, we were not getting very clear instructions from our professional bodies as the situation was changing so quickly – the RCVS and the BVA would publish guidelines in the morning and these would be out of date by the afternoon,” Rob explained. “We went into full lockdown on 20 March. This meant that we would only respond to emergencies and take emergency cases from other veterinary surgeons on referral.”

The front gate is locked (Figure 1) and clients are only allowed to drop off or collect a horse, but it is a nurse who takes the horse off and loads the lorry, minimising social contact. Owners are also discouraged to visit their horses in hospital.

JOHN PERIAM

John is a photojournalist; he worked as a veterinary salesman in the 1960s and still has strong links to the profession through his equestrian work. John is also a regional correspondent for a trade paper for the UK fishing industry.
Equine hospital in lockdown

“We took the attitude that the most important asset we had was our staff; however, as veterinary surgeons we take an oath of duty to care for the animals that we look after. Generally, the criteria to be classed as an emergency was that if it could wait three weeks without compromising the horse’s welfare, then it wasn’t an emergency. Each case was assessed individually, firstly by assessing whether it was a true emergency and then how to minimise risk to the veterinary surgeon attending (Figure 2). The latter was done by asking the owner questions about their current health issues and asking them to think of ways to avoid the vet being contaminated.

“As the country went into full lockdown and we were doing emergencies only, we had to make some tough decisions in order to save the practice as a whole. At the beginning of March, we had 20 horses in the hospital and the end of March we had just two.

“I have been a vet for 35 years and I will always remember 27 March 2020 as being the saddest day of my career as we had to furlough 29 staff members. Some of those people I have worked with for more than 25 years; they aren’t just employees, they are close friends. Ironically, they were so understanding. A few tears were shed. Many responded by saying ‘if you get stuck, I am happy to muck out’ or offering words of encouragement by saying ‘we will come back stronger from this’. The practice continues to provide a service using a selected team (Figure 3) who could cover all potential problems, including emergency surgery.

“There have been situations where I have been disappointed with some clients’ attitude to the crisis. A few were phoning around to see who would vaccinate their horse or investigate their horse’s lameness which had been ongoing for three weeks. I am glad to say that all our local practices have abided by the rules and showed solidarity.

“One client phoned in saying that they had had the virus so weren’t a risk to anyone so couldn’t see why we were reluctant to come and see their horse’s sarcoid. I explained that until either a test is developed that can prove that they aren’t a potential risk or the rules of social distancing were lifted, I was unable to do so. Interestingly this person runs a very small livery yard, yet was happy to potentially put a person’s life at risk.

“In conclusion, I would like to say that we are doing our best for our staff, our clients, our equine patients and humanity. Despite political or religious beliefs, we are all in this together. I hope that we can control the spread of the virus to lessen the impact. I guess it is not until [it is] your loved ones, either in the hospital or even worse, that the reality of the crisis hits home. As of 14 April, the RCVS relaxed the rules and we were able to return to more normal duties as long as we adhere to social isolation measures to protect both the client and the vet, whilst doing what we do best: caring for the horse. The welfare of the horse has been and will be what we at the Sussex Equine Hospital have strived for over many years!”

FIGURE (2) Staff members who are still working must practise safe social distancing wherever possible (3) A skeleton crew is still operating from the hospital when necessary allowing the hospital to provide essential emergency treatment.

We are doing our best for our staff, our clients, our equine patients and humanity
What are the options for managing pain in a different way?

Non-conventional analgesics may be useful when traditional drugs are insufficient or need to be avoided

To manage pain, it is helpful to understand how it is recognised and altered by the body. This is called the pain pathway and consists of four different stages. Different analgesic drugs work at various levels of the pain pathway, so you can interrupt the signal getting to the brain at different levels (Table 1). This use of multimodal analgesia (using several analgesics targeting different parts of the pain pathway) has been associated with improved pain control compared to monotherapy and a lower incidence of side effects, as the quantity of individual drugs needed is lower.

Traditional acute pain management usually involves opioids, COX-inhibiting NSAIDs and local anaesthetics, meaning all stages of the pain pathway are covered. However, at times these drugs may still be insufficient or we may want to avoid one or more of them. It is therefore useful to be familiar with the effects of other "non-conventional" analgesics.

### Alpha-2 adrenergic agonists

Medetomidine and dexmedetomidine (medetomidine’s active isomer) are licensed α₂-adrenergic agonists in small animal practice. They can be administered intravenously, intramuscularly, subcutaneously and transmucosally. When bound to the α₂-adrenoceptors in an animal’s central nervous system, they produce profound sedation and analgesia. α₂-agonists are usually given as part of the animal’s pre-anaesthetic medication, to sedate the animal and to provide a stable background to the general anaesthesia. The drugs afford a reduction in maintenance requirements. However, analgesia is of limited duration so to provide sustained analgesia a constant rate infusion (CRI) can be used (intraoperatively and in conscious animals). A dexmedetomidine CRI has been shown to provide similar analgesia to a CRI of morphine (Valtolina et al., 2009). Analgesia will not occur without some sedation, which may be undesirable in some hospitalised animals. In animals with visceral pain, or those needing some sedation alongside analgesia, these drugs can be very helpful. It is important to remember that α₂-agonists work in synergy with opioids. This means the combination gives especially effective analgesia.

Before choosing to use these drugs, the animals’ cardiovascular stability should be considered as they cause vasoconstriction and hypertension, followed by a decrease in cardiac output via a reflex bradycardia. Atrioventricular blocks may be observed on an ECG. Some animals may also become nauseous or vomit. These side effects are

<table>
<thead>
<tr>
<th><strong>TRANSDUCTION</strong></th>
<th>A painful (= noxious) stimulus is converted into an electrical signal at the pain receptor (= nociceptor)</th>
<th>NSAIDs (COX inhibitors and grapiprant) Corticosteroids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRANSMISSION</strong></td>
<td>A nerve impulse moves along nerve fibres to the dorsal horn of spinal cord</td>
<td>Local anaesthetics</td>
</tr>
<tr>
<td><strong>MODULATION</strong></td>
<td>Adaptation of pain information at various sites of the nervous system. This could lead to amplification (worse pain than the original stimulus) or inhibition (less pain than the original stimulus)</td>
<td>Opioids α₂-adrenergic agonists NMDA-antagonists Paracetamol Gabapentinoids</td>
</tr>
<tr>
<td><strong>PERCEPTION</strong></td>
<td>Becoming aware of the pain. This doesn’t happen under anaesthesia as it requires the animal to be conscious</td>
<td>Opioids α₂-adrenergic agonists NMDA-antagonists</td>
</tr>
</tbody>
</table>

**TABLE (1)** An explanation of the four stages of the pain pathway and the drugs active at those levels

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Sanne Melis, MVM, DipECVAA, MRCVS, is a Diplomate of the European College of Veterinary Anaesthesia and Analgesia and an RCVS Recognised Specialist in Veterinary Anaesthesia. She works as a senior anaesthetist at Pride Veterinary Centre and has a special interest in pain management.
Ketamine works well in animals with chronic pain, which may not be alleviated by “normal” analgesic drugs, and in neuropathic pain, such as animals with a spinal cord injury. There is some suggestion it may also have neuroprotective effects. Ketamine is useful for treatment of somatic pain (superficial tissues, skin) and may be a useful additive to sedation protocols for wound management.

Ketamine undergoes hepatic metabolism and renal excretion in dogs, whereas in the cat it is excreted unchanged in the urine. As the dose needed to provide analgesia is so small, the side effects of this drug are also limited. Dysphoria is seen at times in awake animals. When ketamine is given as a bolus under anaesthesia the animal will frequently go into several minutes of apnoea. This is seldom harmful, just be prepared to ventilate the animal. In awake animals, this respiratory depression is not seen. Animals on a ketamine CRI should regularly have their eyes lubricated as otherwise they could develop corneal ulcerations.

Amantadine and memantine are used in chronic pain management. Amantadine has been shown to increase activity in dogs with osteoarthritis when combined with meloxicam (Lascelles et al., 2008). Memantine works similarly but may additionally have some local anaesthetic activity and is friendlier on the gastrointestinal tract. Neither are licensed for use in small animals.

**Systemic lidocaine**

Lidocaine can provide analgesia when given intravenously as a bolus or an infusion (Figure 2). Other local anaesthetics should not be used systemically due to the risk of cardiotoxicity. As with local blocks, care must be taken not to overdose, as both central nervous system and cardiac complications may ensue. The use of intravenous lidocaine is not recommended in cats as the safety margin is lower.

The mechanism of action is through a sodium channel blockade. It is used for intraoperative (offering MAC reduction) or post-operative analgesia, mainly in patients with visceral or neuropathic pain. It also has anti-arrhythmic effects and is prokinetic, anti-inflammatory and anti-endotoxaemic. Awake animals may become sedated, nauseous and anorexic but only rarely to such a degree that treatment needs to be stopped completely.

**Paracetamol**

Paracetamol inhibits prostaglandin synthesis centrally and peripherally, and interferes with the endogenous opioid, serotonergic and cannabinoid systems. It provides analgesia and is anti-pyretic, but has limited anti-inflammatory effects. It can be used safely in animals where COX inhibition is a concern (eg renal or gastrointestinal disease). Pardale V (400mg paracetamol/9mg codeine) is licensed for use in dogs for five days. An intravenous formulation exists but is not licensed. The use in dogs with liver failure is contraindicated, as is the use of any formulation in the cat.
Gabapentinoids

Gabapentin and pregabalin are available as capsules, tablets and syrup for oral administration. All are categorized as Schedule III drugs. They can be used in dogs and cats.

They bind to calcium and sodium channels in the nervous system, stabilise membranes and prevent release of excitatory neurotransmitters. Although they’re mostly used in chronic pain management oral uptake is quick. It can take up to two weeks for the full effect to appear though. They are useful for treatment of neuropathic pain.

Side effects include sedation and ataxia, but these are mostly transient. In dogs they are partly metabolised in the liver and excreted unchanged by the kidneys. Gabapentin is well tolerated long term, although some sources suggest a gradual tapering of dose to prevent status epilepticus and rebound pain. Pregabalin may be more effective in some dogs.

Gastrointestinal drugs

Although not strictly speaking analgesics, drugs such as antiemetics, antacids, prokinetics and antispasmodics may all have a place in making a patient more comfortable.

The antiemetic maropitant blocks the NK1-receptor, where substance P (a neurotransmitter) binds in the pain pathways so may contribute to (visceral) analgesia (Marquez et al., 2015). It has been shown to decrease the MAC of volatile anaesthetics in dogs and cats.

Conclusion

Other drugs than opioids, COX-inhibiting NSAIDs and local anaesthetics can be useful to manage pain. An important message in these troubled times: you can always find help in unexpected corners! 🎉

References


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Better utilising your nurses

No practice can work efficiently without veterinary nurses – so why are so many practices still not maximising their potential?

Despite the excellent work of the BVNA and others, there is still a public perception that an RVN’s job is simply cuddling pets. This is frustrating for nurses and stifles their career development – a serious business issue given the shortage of RVNs. To offer a higher standard of service – and a more profitable one – and to give your nurses the job satisfaction they deserve, you must utilise them more effectively.

First steps

- **Do:** talk to your nursing team to refresh yourself as to their clinical skills – whether clipping pre-op (let’s face it, they are usually much better at this than the attending vet) through to stitch ups, stitches out, expressing anal glands and some dental work. Then discuss what you need to change to utilise these skills better.

- **Don’t:** cut your nurse clinics – even if you are short-staffed. This will impact your bottom line in a few months’ time as your nurses would have been recommending your neutering services, your foods, your dental treatments and other services. It will catch up with you.

Golden rules

**Run more nurse clinics**

Not only should you prioritise nurse clinics, you should charge for them. Your nurses’ time and expertise are valuable and your clients will pay with one exception to the rule.

Free puppy/kitten clinics should be offered until they are six months old as part of your pet health plan. Keep them free because encouraging new owners to come into the clinic once a month at this early stage gives your nurses a great opportunity to:

- Weigh them, apply weight-appropriate flea/worm treatment and recommend future treatments

- Discuss the importance of an appropriate diet, highlighting the diet that you stock and explaining how owners can get better value by joining your Pet Health Club

- Discuss the importance of neutering/vaccination and the cost benefits offered through the Pet Health Club

These “free” consults will pay for themselves as non-bonded clients are more likely to shop around. Nurses are great advocates for your practice. If you don’t use them in this way, you are throwing money away.

**Make full use of your nurses’ clinical skills**

Take a proper look at the Schedule 3 procedures and make sure you’re working them to the full.

For example:

1. Get both your vets and RVNs to feel comfortable with RVNs performing second vaccinations (when appropriate). This will free up your vets to do more profitable work. This can be particularly helpful, for instance, if you run a vaccination amnesty and are overrun with appointments

2. Stitch ups/stitches out. Many practices now routinely have all post-operative checks carried out by an RN, including the removal of stitches. If the nurse has concerns, they alert the vet. Stitch ups may be a bigger leap, so have a discussion with your RVNs and your wider team

3. Consider aural hematoma/lipoma removal

I know that the procedures in the second and third points are carried out less frequently by nurses, possibly because they are considered grey areas. If they are carried out under general anaesthetic then a vet would need to be present and would then feel justified to carry out the procedure themselves.

In October 2019, the RCVS released some useful guidance to help vets considering delegating Schedule 3 work.

They set out some principles to consider:

- **Specific procedure – is the procedure medical treatment or minor surgery, not involving entry into a body cavity? RVNs and SVN are not allowed to perform certain things, such as major surgery, independent medical treatment, diagnosis, certification, etc

- **Under care – is the animal under the vet’s care?”

STUART SAUNDERS

Stuart Saunders has been a practice manager for more than a decade and currently fulfils this role at Fitzpatrick Referrals. He has been a board member of the Veterinary Management Group since 2016.
Coombefield Veterinary Hospital’s head nurse, Naomi Ashby-Pickford, recently told me that their nurses are increasingly undertaking all of the six- to eight-week post-operative orthopaedics X-rays for their resident orthopaedic vet to check. They are also considering splitting dental procedures into two appointments: the first a dental radiology/scale and polish with an RVN and the second with a vet to undertake more complex work, including extractions. I like this idea; the client will have a better understanding of the costs because the need for extractions can be clearly demonstrated following the first appointment. They will also get better value as the patient will spend less time under anaesthetic – a tick in the box for patient care. Nurses meanwhile retain charge of a service they are qualified to deliver. This will also generate greater use of the dental X-ray equipment, helping the balance sheet.

**Remind your vets to refer to nurse consults**
Do remind your vets to refer patients internally to nurse consults. I was pleased to hear that Naomi’s practice now has a waiting list for their nurse consults – and these are chargeable consults!

**Free up your nurses to do more rewarding work**
Give your RVNs time to do work that is rewarding for them and more profitable for you. For instance, hire and train a suitably qualified person from your lay team to be a pharmacist/dispensing technician. If you make balancing the CD/DD book and stock their prime responsibility, you will free up your nurses to focus on clinics and consults.

Many practices take on work experience students, usually year 10s on placements. You can take this one step further. If any are keen to train as nurses, offer them a paid Saturday job. If all goes well, suggest the Level 2 Veterinary Nursing Assistant Qualification – with you as their sponsor and host practice. You can then influence and support the development of their career in nursing. You would be building your workforce in an affordable way, using your nursing assistants to support your nurses, allowing them more time to do more of what they are qualified for and future-proofing your business.

**To summarise**

- Talk to your nurses
- Develop your nurses
- Promote your nurses and their skills
- Value your nurses

Get this right and you will retain your nurses who, in turn, will help build your bottom line!
What are the options available to employers in the face of the current COVID-19 pandemic?

What can employers do when the business has no revenue coming in and doesn’t have the resources to pay workers?

It’s ever so easy to panic in times of crisis – it’s a natural reaction – but employers should keep a calm head about them. And for Arwen Makin, a senior solicitor at esphr, good communication is key: “It is difficult in these unprecedented times to provide reassurance, but employees should be referred to official sources of information and told that the business is following the current government advice.”

As the government has made clear, prevention is critical and so employees who are unwell, have a continuous cough and/or a high temperature should stay at home. For most people, coronavirus (COVID-19) will cause a mild illness. Even so, the government has updated its guidance with details on the symptoms and self-isolation: in essence, where businesses are still open for essential work, staff should self-isolate for seven days from the first symptoms or 14 days if someone in a household is infected.

Protecting the health and safety of workers
Irrespective of the government’s guidelines – that we try to minimise infection risk – Arwen knows that businesses must prevent employees bringing coronavirus into the workplace: “It now appears that people can be infectious without symptoms so social distancing where possible is the current advice, and is sensible advice, because it will prevent employees becoming ill at once.”

The advice is clear in that if a worker displaying symptoms attends work, they should be immediately sent home to self-isolate – and as Arwen says, “this is a reasonable management instruction due to the employer’s duty to protect the health and safety of other employees”.

Paying statutory sick pay
In general, Arwen says that statutory sick pay (SSP) is payable if employees are incapacitated due to injury or illness or incapacitated despite being capable of work because of necessary self-isolation.

“The 2020 budget,” she adds, “made changes to allow eligible workers to claim SSP from day one of absence; temporarily extended SSP to cover people caring for those within the same household who display coronavirus symptoms and have been told to self-isolate; and also said that businesses with fewer than 250 employees will be reimbursed for any SSP paid to employees in respect of the first 14 days of sickness related to COVID-19.”

The changes were radical, but they still beg the question of whether a business needs to pay statutory sick pay if a worker chooses to self-isolate? For Arwen the answer is clear – “a worker who chooses to self-isolate where none of the requirements are met is not entitled to statutory or contractual sick pay”.

One solution she does recommend is allowing an employee to work from home if the role permits it. “But,” she adds, “employers should consider whether it would be discriminatory to refuse home working, take disciplinary action or withhold pay in light of the employee’s refusal.” And this is more of a problem if a worker has an existing health condition that puts them at higher risk of serious illness or death if they contract COVID-19 as discrimination claims could follow.

But if there is no disability, and the public health advice is such that the employee could reasonably be asked to continue to attend work, then the absence would be unauthorised and disciplinary action could follow. Further, as Arwen notes, “the employee would likely not be entitled to pay.”

There is also an elephant in the room – contractual sick pay. Arwen’s advice here is to look at the precise wording of the contract. She says, “it is tempting for employers to regard a non-symptomatic worker in self-isolation as not ‘actually sick’ and only pay SSP. However, it is very difficult to argue that a worker is not entitled because they are not symptomatic, in circumstances where SSP regulations deem them to be incapacitated.”
What are the options available to employers in the face of the current COVID-19 pandemic?

Sending workers home
But what if an employer sends a worker home against their wishes? Here Arwen Makin thinks the right to pay depends upon the circumstances – “where the employee is able to continue to work from home then they will generally continue to be entitled to their normal rate of pay. If working from home is not possible and an employee is suspended by their employer on health and safety grounds, it is likely that they still have the right to continue to receive full pay.”

The situation is murkier where an employer suspends staff due to official public health advice to self-isolate. Here Arwen says that if the employee falls within the category of people who have been advised by government guidance to self-isolate, then they will fall within the new deemed incapacity rules for SSP.

An allied question is whether employers can make employees take holiday to cover absence. On this Arwen notes that “it is possible to require employees to take annual leave at nominated times provided that they are given the required level of notice”. Of course, employees can also take annual leave instead of being on SSP or nil pay.

An employer imposing home working is technically varying a contract which requires employee consent. But as Arwen notes, “where an employee is faced with either being on SSP or nil pay as an alternative, they may well be willing to consent to working from home”.

Sight shouldn’t be lost of the government’s advice for those considered vulnerable – those over 70, women who are pregnant and those with an underlying health problem. People in this category should either work from home or vary their daily commute to use less public transport.

Laying off staff
The natural reaction when an employer is in trouble is to cut costs and lay off staff. But as Arwen advises, employers should first “check if the contract contains a provision, which allows the employer to temporarily lay people off work (or reduce working hours)”. She says that if there is a contractual right to lay off, then the employer should comply with the requirements of the provision.

Before pulling the trigger, it should be noted that the government is guaranteeing workers’ pay up to 80 percent of £2,500 per month per employee through the coronavirus job retention scheme. Employees with one month’s service may be entitled to claim a statutory guarantee payment (SGP) if they are laid off on up to five workless days in a three-month period. The current SGP maximum is £29 per day.

If other workers are laid off, they can claim a redundancy payment from the business if it’s for four or more weeks in a row or six or more weeks in a 13-week period where no more than three weeks are in a row.

But if there is no contractual right to lay staff off, Arwen says that an employer faces two main choices: “either seek the agreement of the staff to a temporary lay-off or reduced hours or seek the consent of the employees to change the contract to include a lay-off provision”. Here she says that the negotiation must be handled fairly and will require a consultation process and reasonable notice.

She warns, however, that if there is no lay-off provision in the contract, “any lay-off without agreement, would be a fundamental breach of contract, an unlawful deduction of wages and could lead to various employment claims”.

Staff about to join
Employers often see a turnover of staff. The present problem is, however; what happens if a job offer was made before coronavirus kicked off – can the offer be rescinded? The simple answer from Arwen is no. This is because they have been offered employment to start on a set date and they have accepted that offer and the employer is contractually bound to honour that obligation. That said, she says that “it may be possible to agree with the individual that you push back their start date”.

Problems arise where the start date is postponed indefinitely. If they do not agree to vary the start date, then the employer would need to consider alternative options which Arwen says are akin to those above – potentially paying SSP if they have to self-isolate, have them work from home or paying them in full if the business is not closed.

If the employer still wants to rescind the offer, Arwen says to do this “an employer would need to check the terms of the contract to see what notice is required to give to terminate the contract. Further, you would also need to be careful that you do not inadvertently trigger any potential discrimination claims by treating people with any protected characteristics differently.”

It follows that there is a potential for the employee to claim breach of contract and as Arwen explains, “if the employee has left their current job to start with you, and you pull the job offer and they suffer losses as a result, this could lead to a claims risk, especially in the current climate where other jobs may be more difficult to come by”.

In summary
Coronavirus has put employers and employees in very difficult situations where businesses are placed between a rock and a hard place. The key message, if there is one, is that employers shouldn’t act in haste, but with, instead, the benefit of knowledge.

Information about the coronavirus job retention scheme can be found at gov.uk/guidance/claim-for-wage-costs-through-the-coronavirus-job-retention-scheme and to keep up to date with the latest official government advice and guidelines, visit gov.uk/coronavirus
What do I need to consider as landlord of a practice?

Certain aspects of the landlord’s responsibilities can often be overlooked

**Regulatory and compliance documents**
The owner will need to provide an energy performance certificate and an asbestos report to the tenant, if the property was built before the year 2000. The former is a legal requirement to let: if the rating is lower than an E you will not be allowed to legally let the property. The latter is important because if there are asbestos containing materials in the property you will have to either provide a management plan for the tenant to follow or have it removed to prevent any risk or claim materialising. Electrical, gas and fire risk certificates/assessments should all be in order and supplied to the tenant upon request.

**Insurance**
The landlord should always be in control of insuring the property: why? The reinstatement value needs to be correct in the event of a claim (this quite often dictates the premium, so if left to the tenant, it may be incorrect for the sake of a lower premium), having the correct insured risks (if the property floods, for example, and this is not covered, it would be problematic for the landlord). Lastly, in the event of a claim, the landlord should be in control of any insurance proceeds which are paid out against the property. It is worth noting insurance premiums can be charged back to the tenant through insurance rent or service charge and therefore are a recoverable expense of the landlord.

**Schedules of condition**
When you grant a lease of your property to the tenant having sold your business, you want to be sure that at the end of the term the property is returned to you in the same repair and condition it was let in. The best way to deal with this is by annexing to the lease, at the time of grant, a professionally prepared photographic schedule of condition which records the state and repair in written form. This can then be used as a reference point in the future if there is a dispute with the tenant.

**Rent and rent reviews**
It is good practice to have an independent rental valuation of the property undertaken as a landlord and to not rely on the acquirer’s figures. Rent reviews can come in different forms and intervals; the most popular and preferred is open market five-yearly rent reviews which are upward only. For example: 15-year lease, rent reviews would take place in years 5 and 10. If the market dictates a lower rent than the rent reserved in the lease the rent would stay the same; if the market demands a higher rent, the rent would increase accordingly. In short, the rent would only ever increase, not decrease.

**Bank charges**
Following the sale of your practice, it might be worth repaying any monies owed to lenders and clearing your Land Registry title of any bank restrictions. The bank will often have a restriction on your title at Land Registry and this can become problematic when granting leases as you will need to obtain the bank’s consent which can be time consuming and convoluted.

**Common items**
If you as the landlord have to undertake financially burdensome works to the property, like replacing the roof for example, you can ask for the tenant to contribute to a fair proportion of this (often up to 50 percent).

**Inspection**
Inspect the property annually or on a six-month basis (with prior written notice) to make sure the property is being maintained in accordance with the lease.

**Unprecedented events, such as COVID-19**
Ordinarily, the landlord is entitled to forfeit the lease if rent remains unpaid by the tenant for 21 days. However, in unprecedented events the landlord can choose to exercise discretion looking at the circumstances and provide a payment holiday to the tenant or choose to alter the amount the tenant should pay during any one month or quarter; this can be recorded in a letter/memorandum or other document as the parties see fit.

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**QESS ALI**
**HARRISON CLARK RICKERBYS**

Qess Ali is part of the dedicated health and social care team. He specialises in supporting the corporate team in all property aspects, including guiding clients through the due diligence process, granting leases and acquiring and disposing of property.
Maintaining good client relations during lockdown

With practices altering the way they function, there are things you can do to communicate with your clients

The coronavirus outbreak has upended the veterinary industry for the time being, with all practices and staff having to change the ways in which they work in order to deal with the crisis.

Everything has changed so much in such a short time-span that we are all learning as we go along. The most pressing need is to protect your clinic team and your business from the damage that this virus is causing. We all want every team member and every business to still be here when all this is finally over. This means that it’s vital to “corona-proof” your business now, to ensure that you ride out the storm and emerge even stronger on the other side.

Be prepared
Alongside all the things that you can be doing to be helpful to your community, there are also other jobs you can undertake as part of your general business maintenance, so that you are ready and prepared for when the world inevitably recovers.

By being extra helpful in this extraordinary time, you can become the trusted voice for pet owners in your area, which will reap benefits later.

Communicate clearly and consistently
All practices will have plenty of rapidly changing information that you need to broadcast to keep your team and all your customers safe.

You should first update all your Facebook details such as opening hours and out of hours emergency provision. Pin a post to the top of your feed for customers who need to visit the practice and keep this regularly updated. At the same time, make sure your website is up to date, with the latest information easy to find as the main item on your homepage.

Expand avenues of dialogue
Lots of clinics are now using apps to allow for remote consultations, which is a fantastic way to add value for your clients and keep your practice team safe.

If you haven’t already done so, you can also make Facebook Messenger chat available on your practice Facebook page. Remember to announce it in your posts and have your team ready to answer any questions as soon as they come in.

Clearly outline the ways in which you can help your clients
Make a series of Facebook posts or short videos outlining all the extra services you are providing for your clients, such as your social distancing measures, remote consultations or free local delivery on prescriptions and pet food.

Create a weekly content calendar for your team to follow, with a timeline outlining everything you are doing in the clinic to keep people and pets safe and information to put people’s minds at ease.

Focus on providing value to your existing customers
Whilst you are not actively selling to your customers, you can use this time to provide great value to them instead and let them know you are still there. Some things you might share could include charity sponsorship, quizzes, giveaways, competitions, handy tips for games to play with your pets, pet care advice including diet and exercise tips and pet-themed challenges for kids.

Remember you’re not selling anything, just offering as much benefit as possible to your community, to help brighten up their quarantine. Do make sure that you include some nice lighthearted posts in your content too – perhaps not overly frivolous, but the occasional cute pet post will help lighten people’s mood at this difficult time.

Plan for the future
If things are slow, use this time for building your business resilience, so that you’re better prepared should a downturn ever happen again.

Take a look at your online presence. Is your website up to date? Is your Google My Business page as good as it could be? There are plenty of guides online to help you improve how you appear in local searches.

Invest in improving your services and find efficiencies where you can. Allocate the time, or seek outside help to identify weak areas in your systems and marketing and decide how you can strengthen these and make them better. If you haven’t ever written an annual strategic business plan for your practice, now is the moment to make one. By putting things in place to safeguard your business now, you’ll be stronger and more resilient to make the most of new opportunities when the time comes.
nclusion, diversity and culture are buzzwords that have been widely discussed within the veterinary profession over the last couple of years. Every day I am truly thankful that the majority of the profession is embracing this with open arms. 

During my time with the British Veterinary Lesbian Gay Bisexual Transgender Association (BVLGBT) I have met some wonderful people, learnt a tremendous amount and am involved in some fantastic ground-breaking work being done by the BVA and the RCVS amongst others. Most significantly I have listened to some harrowing descriptions of discrimination endured by LGBT members of the profession and these abhorrent episodes are what motivate me to help educate, support and advise members of our profession who may be getting it wrong, or don’t know what to do for the best.

The recently published RCVS survey of the profession indicates that 10 percent of veterinary surgeons identify as non-heterosexual with 8 percent of veterinary nurses identifying the same. The levels of discrimination experienced by LGBT members of our profession make for sobering reading: 27 percent of respondents of the BVA 2019 Discrimination Survey had personally experienced discrimination in the previous 12 months, twice that reported by heterosexual members. Sadly, the same survey highlighted that only a third of all incidents of discrimination are reported.

So, it is clear that there is an issue, and as a profession we need to work together to eradicate it. We all have a right to work in an environment that is open, trusting, fair and, most importantly, safe. Everybody should be able to bring their full self to work and not be forced to portray a false version of themselves to colleagues, employers and clients.

Stonewall (the leading LGBT advocacy charity) identified in their workplace survey of 2017 that 40 percent of bisexual individuals are not “out” to their work colleagues. This is a phenomenal figure and it is quite likely that these individuals feel that being bisexual is unlikely to be taken seriously and that being bisexual leaves them more exposed to workplace “banter”.

It is all too clear when I read some of the discussions on veterinary forums and social media that some of our members don’t seem to realise that to discriminate is to break the law! The Equality Act 2010 makes it illegal to discriminate against a person based on one of nine protected characteristics (race, marriage/civil partnership, pregnancy/maternity, sexual orientation, age, disability, gender reassignment, religion and sex). So not only is it morally wrong, it is illegal!

As employers and colleagues, we should be comfortable and eager to call out these discriminatory incidents by offering robust and consistent responses to these unacceptable behaviours. I would certainly prefer to lose a client to such issues rather than a valuable team member through the lack of support and understanding I may have shown them. Many of us wouldn’t hesitate to refuse to see a client that was verbally or physically abusive; the same strong responses are equally applicable to discriminatory behaviours.

It is true that a large proportion of the discriminatory incidents experienced by our LGBT colleagues are subtle and no doubt unintentional. Regularly whilst consulting I am asked what my wife does for a living. This doesn’t upset me, but quite rightly there are others where these public assumptions cause upset and if encountered on a daily basis are understandably going to wear an individual down, whilst still trying to work in what we know is an incredibly pressured, emotional and stressful profession.

It is vital that veterinary practices should have in place clear policies regarding discrimination and there should be very visible pathways available for individuals to comfortably and safely report discriminatory behaviours. A significant number of those individuals that didn’t report discrimination did not do so because they didn’t know how to, or more worryingly, were afraid to.

I have personally benefited from support offered by a previous employer during one of the darkest periods of my life. My employer wasn’t able to provide specific support regarding my sexuality but he didn’t need to, he simply cared enough to open up a conversation with me. I was listened to and reassured and it is this simple gesture that saved me. That man is my hero!

We all have it in us to be a hero and help others and make our profession lead the way with inclusion, diversity and tolerance.
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