Consider the case of a coughing cross-breed

- Working with the PDSA
- How to approach biliary tract surgery
- Homeopathy: informing the debate
Cute thoracolumbar intervertebral disc herniation in dogs is a common cause of back pain, pelvic limb paresis or paralysis and incontinence. Treatment of this condition has long been a source of controversy, especially since the introduction of surgical interventions in the 1950s. Unfortunately, formal clinical trials to compare efficacy of conservative and surgical interventions have never been carried out. An article in this month’s JSAP discusses the previously published data on recovery associated with the various therapies, focusing on evidence suggesting that decompressive surgery and fenestration may be equally efficacious. Although fenestration does not purport to reduce the compression on the spinal cord that results from the extruded disc, it is thought to reduce the risk of further extrusions from an already damaged annulus, thus preventing worsening of the clinical signs.

While the authors do not propose abandoning the current treatment protocols for canine intervertebral disc disease, they conclude that it might be appropriate to consider comparing the rapidity and completeness of recovery following standard decompressive surgery versus that after multi-level fenestration in a large randomized clinical trial.

Adapted from Freeman P and Jeffery ND. JSAP 2017; 58: 199–204.
BSAVA 60th anniversary celebrated in JSAP online collection

The past 60 years of BSAVA has seen the veterinary profession collaborating together to champion development, learning and discussion. As part of our celebrations, Academic Director Frances Barr has put together a selection of papers published in the Journal of Small Animal Practice over the past 60 years illustrating advances in veterinary medicine since the Association was founded. This selection is available to view via the ‘special features’ section of the JSAP home page (www.wileyonlinelibrary.com/journals/JSAP).

Which JSAP paper from the last 60 years would you choose to highlight? Share your choice on Twitter with @BSAVAEducation using the hashtag #BSAVA60

Leptospira vaccine alert

The Veterinary Medicines Directorate has written to the Veterinary Record to reassure vets, and through them, dog owners, following concerns raised on social media of serious adverse events in dogs given vaccines containing four strains of Leptospira bacteria.

The letter states that, based on the most recent periodic safety update report, data received for each product, the current incidence of adverse animal reactions for all L2 vaccine products combined is 0.015%; for L4 vaccine products this figure is 0.025%. This means that the VMD has received fewer than two adverse reactions for L2, and fewer than seven for L4, for every 10,000 doses sold. This includes every suspected adverse event reported, even cases that were unclassifiable or were later found to be unrelated to the vaccine. Therefore, the overall incidence of suspected adverse reactions for both L2 and L4 vaccine products is considered rare.

It has been noted that the majority of reported signs are linked to allergic reactions, which are well-recognized potential side effects of any vaccine. It is also stated that for some brands of L4 vaccines, administering a vaccine cold, would be less likely to cause local/systemic reactions.

The full contents of the VMD letter can be accessed online veterinaryrecord.bmj.com/content/180/10/257.2

The BSAVA also has a range of information resources on Leptospirosis in dogs – www.bsava.com/Resources/Veterinary-resources/Scientific-information/Leptospirosis-vaccination

Thiamine deficiency update

The BSAVA has provided a brief update on thiamine deficiency (www.bsava.com/news) following the recall of certain cat food varieties where the level of thiamine (vitamin B1) was lower than specified. Reports came to light of some cats requiring veterinary care 4–6 weeks after switching to one of the affected products, displaying symptoms of sudden collapse, fits, flashing and general unsteadiness.

Andrew Thomas Bailey Edney, Past President of the Association from 1979–1980, passed away on 2 March 2017 aged 84. An article about Andrew’s involvement with the Association will appear in a future edition of Companion.

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As befits a young man who spends much of his free time on the rugby pitch as a flank forward, Terry Ogdin loves to be in the thick of the action. But like many newly qualified vets entering farm or mixed practice, he found that he wasn’t given much opportunity “to get stuck in”.

Most large animal clients preferred to entrust the care of their precious livestock to the senior staff at the North Wales mixed practice that he joined after graduating in July 2009. So while Terry strove to gain the confidence of the local farmers, he was often relegated to the unexciting but necessary role of TB tester.

Terry felt that he wasn’t getting enough exposure to clinical cases to sharpen and expand his range of professional skills and after a few months he moved on to a largely equine practice in Cheshire.

However, horse owners are often equally reluctant to let the junior assistant take responsibility for their veterinary care and as a young man in a hurry, he wanted to gain experience working up his own caseload. So after a while, Terry decided to explore an area that, up to that point, would have seemed like alien territory – small animal practice.

The idea of working in the welfare charity sector was even further from his thoughts. But he spotted an advert in the Veterinary Record for a vacancy at the PDSA’s Blackpool clinic, not far from his old family home in Preston, and took a punt in sending in his application. The more he investigated what the role would entail, the more he realized it would give him what was missing from his career to date – better opportunities for interacting with clients and the chance to do a thorough clinical work up on challenging medical and surgical cases, he says.

Clearly, the charity could see the makings of a talented small animal vet and in August 2011 he became a member of the clinical staff at the hospital on Hawes Side Lane. Nearly six years later, he is still there. “It is funny how your career pans out. Working for a charity hadn’t even registered on my radar up to that point but I thought ‘What the heck’ and I have never looked back. I have found the job really satisfying.”

Finding a home

The Blackpool Pet Hospital is one of the smaller PDSA centres with five to six vets, a similar complement of veterinary nurses together with reception and support staff. At any one time there are likely to be around 20 people working there, providing services to pet owners from its four consult rooms and two operating theatres. Its clients are those pet owners living within the catchment area who are in receipt of council tax or housing benefits.

The vast majority of patients are the two main pet species with just the occasional rabbit, hamster or budgerigar. “One difference from the workload at a private veterinary practice is that we don’t really see the exotic pet species. We are simply not geared up to deal with things like bearded dragons. Most of our diverse workload involves working up medical and surgical cases. We also spend time educating our
clients and providing preventive services and treatments,” he explains.

New entrants into the charity sector are given plenty of opportunity to develop skills in quite demanding surgical procedures such as cruciate ligament repairs or pyometra cases. “Sometimes these will have been referred to us by neighbouring practices because the client would simply not be able to afford the costs of the surgery.”

Working with patients and private sector

Terry says that teaching responsible pet ownership is a crucial element in the duties of a PDSA vet. By definition, the charity’s clients will not have a large disposable income but they will want what’s best for their pets and they may not always have the knowledge and resources to find out what is available. Our PetWise MOT consultations help clients learn about their pet’s welfare needs and highlight the importance of preventive healthcare.

“We are constantly emphasizing the importance of regular worming and flea treatments and of the need for vaccinations, microchipping and neutering. It is a big part of the job – pet owners need to understand all the ways they can help their pet lead a happy and healthy life.”

A day in the life of...

So what would a typical working day at the Blackpool clinic be like? Terry says the day usually begins at 9.00 am or half an hour earlier for the clinician with responsibilities on that day for admitting and preparing those patients booked in for elective surgery. Most days there is usually one vet operating and four consulting during normal working hours. Routine clinics finish at 5.30 pm and there is normally a one-in-five rota for evening and weekend duties.

In addition to the standard clinical duties, the veterinary staff are also likely to get involved in the charity’s educational work, an aspect of the job that Terry says he particularly enjoys. He regularly talks to local secondary school children on the work of a veterinary surgeon as well as speaking to final-year vet students attending the annual SPVS weekend, in Lancaster, on careers within the charity sector.

CPD supported

Like colleagues in the private sector, PDSA vets are also expected to keep their own skills up to date. “We are allowed five days of CPD training each year with a personal budget of £1000 to cover this. We discuss what courses we’d like to do with the senior vet and they’re very flexible, although signing up for a course on pregnancy diagnosis in the camel might raise a few eyebrows!”

“I will usually try to attend the BSAVA Congress in Birmingham because it has such a good range of material and its usually pitched at the right level for someone like me. My particular interest is in orthopaedic surgery and I would like to go on to do a certificate in that subject when the time is right,” he says.

A campaigning voice

As well as offering clinical services to needy pets, PDSA also has a strong voice within the sector on pet welfare issues, notably through its annual PAW (PDSA Animal Wellbeing) Report. Terry and his colleagues are involved in highlighting the successes and failings in UK pet owners meeting their pet’s 5-welfare needs.

Asked what he views as the biggest problems facing the nation’s pet animal population, Terry notes the issues around irresponsible dog breeding and the worrying increase in the popularity of fashionable but unhealthy brachycephalic breeds.

But the trend that causes him the greatest concern is the growing number of obese dogs and cats that he sees every day in the Blackpool Pet Hospital. “Just as in private practice, we have to push and push to make people aware that this is a problem. I have to tell maybe one in three owners that come into my consult room that their dog is overweight. Many people just can’t see it because there are so many obese animals around that it has become the norm in their eyes.”

“The flipside of that is that I am having to reassure the owners of dogs that are in the normal weight range that they are doing the right thing. It has become disturbingly common for the good owners to have people confronting them in the local park and telling them that they are not feeding their pet properly.”

To find out more about working with PDSA visit www.pdsa.org.uk
CONSIDER THIS CASE: A LAME FLAT-COATED RETRIEVER

Clinical conundrum

Alessandro Conte, a former intern at Willows Veterinary Centre invites Companion readers to consider a lame Flat-Coated Retriever

Case presentation

A 6-year-old female neutered Flat-Coated Retriever presented as a referral to the orthopaedic team for investigation of a progressive, pelvic limb lameness of 3 months duration. The lameness had not responded to 6 weeks of rest and NSAIDs. The referring veterinary surgeon had obtained radiographs of the lumbar spine, pelvis and left stifle. These revealed spondylosis deformans of L6–L7 and L7–S1 and equivocal evidence of left stifle synovial effusion.

At presentation there was a 4/10 left pelvic limb lameness, muscle atrophy of the pelvic limb, pain on left hip extension and equivocal pain on manipulation of the left stifle and lumbosacral region. The neurological examination and the general examination were unremarkable.

Create a problem list with differential diagnoses based on the history and physical examination

Pain on left hip extension:

- Osteoarthritis secondary to hip dysplasia
- Osteoarthritis secondary to previous trauma or other developmental disease
- Neoplasia (e.g. osteosarcoma, chondrosarcoma, histiocytic sarcoma, fibrosarcoma, synovial cell sarcoma)
- Inflammatory arthropathy
- Spinal nerve-root impingement
- Referred pain from stifle extension or from lumbosacral region
- Iliopsoas myopathies and tendinopathies
- Fracture
- Septic arthritis

Equivocal left stifle pain:

- Cranial cruciate ligament disease
- Osteoarthritis
- Patellar luxation
- Tendinopathy (gastrocnemius tendon, patellar tendon)
- Meniscal trauma
- Fracture (femur, tibia, fibula, patella)
- Inflammatory arthropathy
- Septic arthritis
- Osteochondritis dissecans of medial aspect of lateral femoral condyle
- Neoplasia (e.g. primary bone tumour, histiocytic sarcoma, synovial cell tumour)

Equivocal lumbosacral pain:

- Degenerative lumbosacral stenosis
- Degenerative disc disease (Hansen type I and type II)
- Discospondylitis
Nerve-root impingement
Meningitis
Luxation (sacroiliac, sacrococcygeal)
Fracture (vertebral)
Neoplasia (e.g. primary bone tumour, histiocytic sarcoma, haemangiosarcoma, peripheral nerve-sheath tumour).

Create an initial diagnostic plan. What diagnostic procedures would you perform initially?
To avoid muscle tension and to appreciate even minimal deviation from normality, it is recommended that the dog be examined under deep sedation or general anaesthesia. A full orthopaedic examination was performed on both pelvic limbs. On manipulation of the left stifle, despite a small degree of laxity, there was a definite end point on the cranial drawer test and no evidence of joint effusion. Both stifle joints were considered normal.

What diagnostic procedures would you perform next?
MRI was performed to assess the spinal cord, intervertebral discs and nerves around the area of lumbosacral degeneration on the referring veterinary surgeon’s radiographs. The MRI revealed ventral spondylosis of L6–L7 and L7–S1, mild protrusion of the L7–S1 disc but no evidence of nerve-root impingement. There was also a focal area of slightly irregular enlargement of the left sciatic nerve as it travelled caudal to the greater trochanter of the femur (Figures 1 and 2).

Re-evaluate the problem list. How would you interpret the problems so far?
- L6–L7 and L7–S1 spondylosis deformans
- Mild L7–S1 annular protrusion
- Suspected sciatic nerve enlargement

As there was no evidence of nerve-root impingement, the vertebral spondylosis deformans and disc protrusion were not considered clinically significant, but the focal enlargement of the sciatic nerve was of concern. The primary differential for this is an inflammatory neuropathy (e.g. idiopathic/immune-mediated/traumatic neuritis). Given the focal nature of the sciatic nerve enlargement, consideration must also be given to the possibility of neoplasia; however, sampling, for example using fine-needle aspiration (FNA), would be required for confirmation.

What is the next course of action for this dog?
Despite the lack of a definitive diagnosis, the differential diagnosis list has been reduced to either an inflammatory or a neoplastic process. The dog’s analgesia protocol was altered to continue with meloxicam and gabapentin (10 mg/kg q8h) was prescribed. A re-examination with a view to repeating the MRI was advised in 6–8 weeks.

At the re-examination the owner reported some improvement in the lameness but the muscle atrophy had progressed and there was now significant pain on left hip extension.

What is your next step at this point?
As the owner perceived some improvement and keeping in mind that chronic inflammation could take a prolonged period of time to resolve, it was decided to...
CONSIDER THIS CASE: A LAME FLAT-COATED RETRIEVER

continue with the current medication and repeat the MRI in 6 weeks.

After 6 weeks the dog was 6/10 lame and there was dropping of the hock during the stance phase. A second MRI was performed and revealed the left sciatic enlargement had progressed, extending over a longer section proximally dorsal to the greater ischiatic notch and medial to the body of the ilium (Figures 3 and 4).

How would you interpret the imaging findings now?

Given the progression of the left sciatic nerve thickening and the partial response to medical treatment, neoplasia is now considered to be higher up the differential list. Differentials include primary nerve-sheath tumour; such as a peripheral nerve-sheath tumour (PNST), for example Schwannoma and, given the breed, histiocytic sarcoma.

Would you perform further diagnostic tests?

Given the differential of neoplasia, a diagnosis is advisable before embarking on treatment, especially limb amputation. Cytological diagnosis by means of FNA is possible but this is a difficult area to sample and risks a non-diagnostic sample. A surgical biopsy is highly recommended. This will provide a histological description and aid in advising on prognosis.

The sciatic nerve was approached via a partial craniolateral approach to the hip. The biceps femoris muscle was retracted caudally and the sciatic nerve identified. The thickened portion was visualized and short longitudinal biopsy specimens taken following incision of the epineurium (Figure 5).

Histopathology confirmed the thickened nerve to be a malignant PNST. These are locally invasive tumours and, even if rare, can carry a risk of metastasis (e.g. pulmonary).

What are the treatment options for this dog?

Management options for PNST are limited, especially if high grade, as this increases the possibility of metastasis. Inflated orthogonal thoracic radiographs should be recommended to exclude the possibility of metastasis, bearing in mind that this investigation can only diagnose masses bigger than 2 cm. A CT scan would give better resolution and, if finances allowed, would enable better exclusion of metastatic disease. Furthermore, in some cases of MPNST it may take a protracted period for metastasis to develop; greater than 3 years from the time of the diagnosis has been reported.

Medical therapy can be attempted, usually following incomplete surgical resection; however, there is limited evidence for their efficacy in the literature. Soft tissue sarcomas (STS) are a heterogeneous group of neoplasms that also include PNSTs, but no
chemotherapy options are specifically available for PNSTs. Very few studies have described chemotherapy for STS but it has been shown that metronomic cyclophosphamide (daily administration of low doses ranging from 10–15 mg/m²) or conventional cytotoxic chemotherapy with doxorubicin can reduce the chance of local recurrence or metastatic disease. No information is available for radiotherapy of PNSTs either, although its use has been extensively described for the treatment of incompletely resected STS.

Surgical resection is the treatment of choice but complete resection of the tumour is rarely possible because it is difficult to obtain wide margins due to the anatomical location. Resection of the sciatic nerve requires pelvic limb amputation and it is usually recommended to disarticulate the coxo-femoral joint to make this possible. Resecting the thickened area of sciatic nerve requires resection close to the lumbosacral plexus. The lumbosacral plexus consists of a fine interconnection of nerves deriving from the last five lumbar nerves and the first three sacral nerves, and supplies the skin, rectum, bladder and musculature of the lower limb. To avoid postoperative complications such as faecal or urinary incontinence it is necessary to only resect the sciatic nerve and no other nerves arising from the plexus. Despite aggressive surgery, local recurrence in the remaining neural tissue is very common; however, many dogs can lead a good quality of life for several months and owner satisfaction following limb amputation is generally very good.

In this case three inflated thoracic radiographs were obtained before a left pelvic limb amputation was performed and the sciatic nerve, with the proximal margin labelled with suture, was submitted for histopathology. This confirmed the previous diagnosis of PNST with the transverse section of the proximal end of the nerve containing a minimal perivascular lymphoplasmacytic infiltrate, but was clear of neoplastic tissue.

Outcome

The dog recovered well from surgery and was fully ambulatory with minimal pain the following day. On telephone follow-up 6 months after surgery, the owner reported the dog to be doing very well.

Acknowledgement: The author would like to thank Scott Rutherford for his help with the Clinical Conundrum.

Submit a Clinical Conundrum

With the Clinical Conundrum we hope to offer accessible, thought-provoking CPD for the reader and to allow some in-depth discussion of the intricacies of the case presented. In particular it is hoped that cases will challenge the reader to consider a dilemma, be it a diagnostic challenge or a treatment/surgical decision, and to work through it to a logical conclusion.

The aim of the Clinical Conundrum is to present clinical scenarios that are encountered in small animal practice and discuss briefly any particularly important features of the case. The Clinical Conundrum can focus on the complete case management or one aspect of the case management in more detail.

An unusual diagnosis does not necessarily mean that a case will be suitable to present as a Clinical Conundrum. In fact, the final diagnosis is not the most important part of the feature. Indeed, the cases that make the best Clinical Conundrums discuss a presentation thoroughly, logically progress through a case and achieve a robust diagnosis or treatment choice. It is the dilemma regarding diagnostic or treatment progression that is important rather than the final diagnosis in and of itself.

The editorial team is more than happy to advise potential authors and particularly encourage submissions from those in general practice.

Authors should aim for a piece of 1400–2000 words in length with 1–5 illustrative pictures. Given that the emphasis of this feature is problem solving, references are not usually required unless specific literature is mentioned or their use is needed to support the approach taken. We are particularly keen to have submissions that have additional video content for use with our digital versions of Companion.

An honorarium is payable on final acceptance of the article. If you have an idea for a Clinical Conundrum, please contact us at companion@bsava.com and access the full submission guidelines online at www.bsava.com.
It has long been an ambition to have all the BSAVA content resources available in digital format in one place. A major step towards this goal will be the launch of the BSAVA Online Library later this year, incorporating the manuals and many other resources. BSAVA Publications Manager Ian Mellor explains more.

BSAVA’s series of 45 manuals (and counting) provide a comprehensive dataset of chapters covering small animal clinical practice. Many of the chapters and books cross-refer to each other and the content of each manual is designed in the context of other existing titles in the series. However, unless you possess the full set and an encyclopedic knowledge of the contents, this inter-relatedness may not be apparent. What if all the manual chapters – and all the rest of BSAVA’s published output – could be browsed and searched in one place?

At present, 15 of our manuals are available to members in ebook format and a number of our books are available digitally for academic libraries to purchase through specialist suppliers. However, an ebook is still just a standalone item – it may be possible to search inside the text or enlarge illustrations but it has no relationship with other resources that may provide critical additional information.

The BSAVA Online Library will be far more than a shop for ebooks. Our resources will be available at the granularity of chapter, article, drug entry, client leaflet, congress lecture summary and so on. A search will show everything we have produced that is relevant to your enquiry – whether from a manual, a Companion article or a Congress lecture – and content will be linked through to other related items.

The site has been designed to mirror the clean, modern look of the new BSAVA website and is ‘responsive’ so will work easily on mobile devices as well as computers. Members will only need to log in once to gain access to their member benefit resources on both www.bsava.com and the new BSAVA Library.
Browsing the digital shelf

The resources will be organized logically by type – manuals and other books, the Small Animal Formulary (both the new cats and dogs and exotic pets sections), Companion, educational content including Congress and CPD webinars, and other veterinary and client resources. At a top level you will be able to browse by broad topics or look for resources that are useful e.g. for veterinary students, or for professionals and personal development.

Each book or resource will have its own home page from where you can drill down to see the chapters. Each chapter will have a summary, with the option to purchase access to the full text, including separate tabs to easily view the illustrations, references or any supplementary resources.

The power of search

Nowadays most people are familiar with using simple and quick search boxes, and it is anticipated that this is how most will use the BSAVA Library. Once you have your initial search results you will be able to search within a particular book, or filter your results further to narrow them, for example, to see just manual chapters, or Companion articles, or Formulary drug entries, or results relating to cats, or reptiles, or hamsters. If you prefer to create more complex searches yourself, an advanced search tool will enable you to look across a number of variables.

Members get so much more

BSAVA members will continue to have free access to all the great digital resources that are currently available at www.bsava.com, including:

- BSAVA Small Animal Formulary
- Companion
- BSAVA Guide to Procedures in Small Animal Practice
- BSAVA Congress Proceedings and Podcasts
- Client Information Leaflets

Related items will be linked, such as a Formulary drug entry and its corresponding Client Information Leaflet, or a Congress lecture summary and its audio and video podcasts.

Need that crucial chapter?

Manual chapters and other premium content will be available for purchase. The details of the purchasing options for the site are still to be finalized, but it is envisage that members will be able to buy a block of credits to access chapters, with the usual member discount on price plus some introductory free credits and bonus credits for loyal members. This way, you will have access to everything on the site but only pay for what you use. Alternatively, if all you need is one chapter, you can buy it.

Curated collections

In a world of information overload, there is increasing recognition of the value of curating digital resources to help people find authoritative and genuinely useful content to help with their queries. In addition to your ability to browse, build complex searches or find things by relatedness or serendipity, the BSAVA Online Library will also enable us to group together information on topical subjects or problem areas for small animal practice – including collections based on your feedback.

Long live print

We will of course continue to publish manuals and other books. The anecdotal feedback we receive indicates that many in the veterinary profession still prefer to have printed copies – perhaps in addition to digital access. Even if all you do is visit the BSAVA Online Library to search and then go to your practice bookshelf to read the relevant chapter, it will be a valuable resource you will find yourself using more and more. And you are safe in the knowledge that if the book is not on your shelf, you can use your credits to access that critical chapter online immediately.

We welcome your ideas

More updates will follow as the project progresses, but we would welcome your feedback by emailing publications@bsava.com.
Successful outcomes following surgery to the biliary system are dependent on a number of patient, condition and surgeon factors. Crucially, not only must the surgeon have a thorough grasp of the anatomy, careful tissue handling skills, appropriate delicate instrumentation and access to modern theatre lighting, but also, in many instances, have the knowledge to make decisions intraoperatively as to which surgical intervention is actually the correct one for the individual patient.

Bile and its function
Bile is a yellow-green-black fluid, produced by the liver with the main function to aid digestion of fats in the small intestine. The main components of bile are:

- 97% water
- 0.7% bile salts
- 0.5% fats such as cholesterol and fatty acids
- 0.2% bilirubin.

Bile salts are hydrophilic on one side and hydrophobic on the other. The hydrophobic side of a bile salt can stick one after the other, all the way around the circumference of the lipid droplets to form a micelle. The micelles then repel each other, allowing easier access to pancreatic lipase enzymes to digest the fat between the bile salts.

Bile also assists the absorption of vitamins A, D, E and K, provides a route of excretion for bilirubin, is alkaline so neutralizes gastric acid and can be bacteriocidal for some microbials in food.

Bile storage and its access to the small intestine
Bile is stored in the gall bladder (GB), which nestles in a fossa between the right medial and quadrate lobes of the liver. Bile flows via the cystic duct and common bile duct (CBD) into the duodenum via the major duodenal papilla located 3–6 cm distal to the pylorus. It is worthy of note that there are numerous small hepatic ducts which enter the CBD at various locations along its course and could be susceptible to iatrogenic damage during surgery (Figure 1). The CBD travels through the lesser omentum along the hepatoduodenal ligament before entering the wall of the duodenum. As food flows into the duodenum, cholecystokinin is released from the mucosal surface of the small intestine and stimulates GB contraction.

Comparing the biliary system in cats and dogs
The biliary system in cats and dogs is similar but not quite the same. It would not be unheard of to find a partially divided GB or a double GB in a cat. The CBD of a cat also merges with the major pancreatic duct (PD) as a single entity before bile emerges from the major duodenal papilla; however, in dogs, the CBD and PD travel alongside each other but remain separate. Biliary and pancreatic diseases are commonly seen together in the cat because of this highly integrated anatomy. The normal diameter of a CBD in cats is 1–2 mm and in dogs is 2–3 mm (Figure 2).
Surgical intervention

The two most common categories requiring surgery would be:

1. Extrahepatic biliary tract obstruction (EHBTO) conditions which are either not responding to, or not appropriate for, medical management. Those emboldened below are the most commonly associated with the need for surgical interventions:
   - Luminal: inspissated bile, gall bladder mucocele, stones, cysts
   - Mural: cholangiohepatitis, strictures, biliary carcinoma
   - Extraluminal: pancreatitis, pancreatic abscess, neoplasia, gall bladder entrapment
2. Trauma or rupture of the biliary tract.

How patients present and making a diagnosis

Focus will be made on those biliary conditions that are most likely to require surgical assistance. Firstly, medically non-responsive cholangiohepatitis patients often have a chronic duration of waxing–waning appetites, intermittent vomiting, lethargy, weight loss and jaundice (Figure 3). Secondly, dogs with gall bladder mucoceles (abnormal accumulation of mucus, Figure 4) can have vague signs of intermittent appetite, being picky with their food, lethargy, vomiting or abdominal discomfort, but sometimes have no obvious clinical signs. In the UK, we are seeing an increasing number of Border Terriers with EHBTO due to gall bladder mucoceles. It is also worth noting that dogs with hyperadrenocorticism are 29 times more likely to develop a gall bladder mucocele than those dogs without hyperadrenocorticism.

Diagnosis is dependent on a patient with clinical signs as above, blood profiles identifying elevations in bilirubin, ALT, ALKP and white blood cell count and a skilled ultrasonographer documenting the abnormalities of the biliary tract. Do remember though that not all patients display all the typical clinical signs and that sometimes the bilirubin can be normal in the earlier stages of EHBTO, so ultrasonography plays a vital part in the diagnosis. Ultrasound assessment can detect distention of the CBD and cystic duct, define the contents of the GB, detect both radiolucent and radiopaque choleliths, and also detect and guide aspiration of small pockets of intra-abdominal fluid associated with gall bladder rupture (Figure 5).
Procedure | What is this? | Reason
--- | --- | ---
Cholecystotomy | Opening up of GB | Remove inspissated bile
Cholecystoduodenotomy | Attach the GB to the duodenum via 3 cm stoma | Divert bile flow due to non-patent CBD
Cholecystectomy | Removal of GB | GB stones or mucocoele
Duodenotomy | Open proximal duodenum 3–6 cm distal to the pylorus with the purpose of accessing the DP | Catheterize the CBD, ensure patent, gently aspirate biliary sludge, mucus and lavage
Cholecystoduodenotomy | Attach the GB to the duodenum via 3 cm stoma | Divert bile flow due to non-patent CBD
Cholecystostomy | Place Foley catheter into GB via abdominal wall | Allow temporary decompression of GB while inflammation or pancreatitis resolves
Cholecystoduodenotomy | Opening of a dilated CBD | Remove stone in CBD
Cholecystectomy | Removal of GB | GB stones or mucocoele
Cholecystoduodenotomy | Attach the GB to the duodenum via 3 cm stoma | Divert bile flow due to non-patent CBD
Cholecystoduodenotomy | Opening up of the GB | Remove inspissated bile
Cholecystotomy | Opening of the GB | Remove stone in CBD
Duodenotomy | Open proximal duodenum 3–6 cm distal to the pylorus with the purpose of accessing the DP | Catheterize the CBD, ensure patent, gently aspirate biliary sludge, mucus and lavage
Cholecystoduodenotomy | Attaching the GB to the duodenum via a 3 cm stoma | Divert bile flow due to non-patent CBD
Cholecystectomy | Removal of GB | GB stones or mucocoele
Cholecystoduodenotomy | Attach the GB to the duodenum via 3 cm stoma | Divert bile flow due to non-patent CBD
Cholecystectomy | Removal of GB | GB stones or mucocoele
Cholecystoduodenotomy | Attach the GB to the duodenum via a 3 cm stoma | Divert bile flow due to non-patent CBD

TABLE 1: The most commonly considered surgical procedures that are often combined with biopsy of the liver.

* CBD = common bile duct; DP = duodenal papilla; GB = gall bladder.

Preoperative planning

Even for the more urgent situations of rupture to the biliary tract or a biliary mucocele rupture, take some time to ensure the patient is as stable as possible and that the equipment is organized. Patients with EHBTO are usually chronically ill, and will need some degree of postoperative support, of which enteral feeding is often a key factor.

Patient check list

- Intravenous fluids and electrolytes corrected
- Coagulation: in patients with EHBTO, there may be a vitamin K deficiency, which can affect the clotting cascade factors 2, 7, 9 and 10. Prothrombin time (PT) measurement can detect a prolonged coagulation, necessitating preoperative vitamin K injections

Equipment check list

- Suitable theatre lights with light handle
- Surgical suction and diathermy using bipolar hand piece
- Balfour retractors: paediatric, medium and large sizes
- Radiopaque swabs: to be counted when surgery commences and prior to celiotomy closure
- Debakey forceps, ideally 15–18 cm in length
- Curved Metzenbaum scissors, ideally 15–18 cm in length
- Mixter curved forceps
- Haemostatic clips and applicators, medium and large size
- Polydioxanone 4/0 1.5 m and 5/0 1 m
- Haemostatic sponge
- A scrub assistant
- Variety of urinary catheters, nasal oxygen/ nasogastric feeding tubes 3.5–8 fr, soft to pass into the CBD but with some stiffness (ideally not rigid or with stylet)
- Foley catheters 6, 8 and 10 fr for potential temporary biliary diversion
- Oesophagosotomy tubes 10, 14 and 20 fr
- GI low-fat diet, liquidized

Medication check list

- Methadone
- Paracetamol intravenous (use in dogs only)
- Ranitidine and omeprazole
- Intravenous antibiotics such as cephalosporin or co-amoxiclav

Opening of the gall bladder for purely removing inspissated concretions of bile is not often necessary as a stand-alone procedure.

Decision making and the surgical procedure

In people with EHBTO with CBD obstruction, the majority are treated with endoscopically placed CBD stents, and cholecystoliths are dealt with by lithotripsy or laparoscopic cholecystectomy, converting to open surgery if required. Although these techniques are filtering into the veterinary world, they are still far from mainstream treatments for the majority of veterinary patients. The most common surgical procedures we still consider are shown in Table 1 and are often combined with biopsy of the liver.

Cholecystectomy and catheterization of the cystic duct and common bile duct

Opening of the GB for purely removing inspissated concretions of bile is not often necessary as a stand-alone procedure. It would always be combined with catheterization of the cystic duct and CBD. The celiotomy incision must be from the xiphoid to at least the caudal umbilical region, giving enough length to gain adequate exposure of the cranial abdomen upon retraction. Remove the falciform fat (Figure 6). Use soaked swabs to pack off surrounding viscera and use stay sutures in the GB to aid manipulation. Surgical suction is essential to limit spillage of bile. Remove the contents of the GB, send fluid for culture and take a small sliver of GB wall for histopathology. Now lavage...
the GB with warm saline and very carefully introduce a small, 3.5–8 fr soft latex or PVC catheter from the GB into the cystic duct to check patency. It is very difficult to get the catheter to go from the cystic duct into the CBD, so often a duodenotomy is performed to allow visualization of the major duodenal papilla. This enables an easier introduction of a catheter into the CBD for decompression if distended and checking of patency (Figure 7). The GB is closed with an inverting Lembert suture pattern using 4/0 1.5 m monofilament suture and the duodenotomy closed with a simple interrupted or continuous pattern of 4/0 1.5 m monofilament suture. Liver biopsy specimens should also be taken for histopathology (Figure 8).

Choledochal stenting: stenting of the common bile duct

There will be instances where the CBD has been successfully catheterized but not without difficulty due to stenosis caused by inflammation. One option is to consider leaving a small section of tubing to temporarily stent the CBD; this is known as a transpapillary biliary endoprosthesis. Using a 5 cm section of 4–8 fr latex, red rubber or PVC feeding/nasal oxygen tubes, feed a 2 cm section into the CBD, leaving a further 3 cm into the duodenum.

The duodenal end of the tubing is tacked into the duodenal mucosa with 4/0 1.5 m monofilament absorbable suture material. The tubing material chosen needs to be soft enough to suture; so although red rubber is inherently a material that causes irritation if left in mucosal contact, it is a pliable material that can be considered for suturing. However, the most ideal material for the CBD stent is one that is soft, minimally irritant and with a radiopaque marker. The stent is a temporary measure to allow improved bile flow. Eventually, the sutures absorb and the stent tubing passes into the gastrointestinal tract, being defecated out.

Another variation on this technique is to surgically implant the tube into the CBD via an approach from the right abdominal wall, tunnelling the tube into a section of duodenum before it enters the CBD via the duodenotomy site; a similar technique can be used when placing a jejunostomy tube. This means that over time, contrast radiographic studies can be performed to check patency of the extrahepatic biliary tree and also the tube can be definitively removed.

It is worth noting though that whatever material is used as a stent, indwelling foreign material is being left, which will induce inflammation, could induce fibrosis and will act as a conduit for bacteria, so justification is needed when opting for this technique. Although choledochal stenting can be a useful technique in dogs, it does carry greater morbidity in cats. In human beings, CBD self-expanding stents are routinely placed endoscopically to palliate severe pancreatitis or malignancies. Although this technique has been undertaken by veterinary endoscopy specialists with favourable outcomes, it is certainly a technically
challenging procedure and is not currently considered a viable alternative to surgical stent placement.

**Gall bladder decompression and bile flow diversion**

Decompression of the GB for temporary bile flow diversion is not frequently performed; however, it is a handy technique for when the need arises to temporarily alleviate the distension of a fluid-filled GB in a patient with either EHBTO secondary to severe pancreatitis, or a non-medically responding EHBTO in an unstable patient awaiting a more definitive surgery.

A celiotomy is performed. A pre-inflated checked Foley catheter is introduced via the right flank wall into the abdomen just behind the ribs, taking the tube through a leaf of omentum. A purse string suture is laid into the fundus of the GB using 3/0 2 m monofilament absorbable suture. A stab incision into the GB in the centre of the purse string allows the Foley to enter. The purse string is secured and the balloon of the Foley inflated. There is usually no need to mobilize or pexy the actual GB; the omentum will seal the Foley entry site once removed. The Foley can be removed from 7 days after placement or left in place longer as required depending on the patient’s condition. A tube cholecystostomy does require careful management and the usual measures and vigilance to prevent an untimely disruption or removal by the patient.

There is usually no need to mobilize or pexy the actual gall bladder; the omentum will seal the Foley entry site once removed.

**Cholecystoduodenostomy: permanent bile flow diversion**

Do make a mental note that biliary tract diversion surgery for EHBTO can amount to prolonged surgical time due to the intricate nature of the surgery, so only embark upon this when the patient is adequately stabilized. Consider another quicker method of biliary tract decompression (tube cholecystotomy) as a short-term measure to improve a severely debilitated patient clinically prior to undertaking the definitive surgery for biliary diversion (cholecystoduodenotomy). Patients necessitating a permanent diversion of bile from the GB directly into the small intestine have irreversible and recurrent CBD obstruction or trauma to the CBD. The most commonly performed diversion is from the GB to the duodenum, mimicking the physiological course of bile flow as much as possible. The GB is mobilized from the hepatic fossa with care not to damage the cystic artery supplying the GB, which runs on the craniolateral surface of the cystic duct. Moistened swabs are used to pack off the surrounding visceras, the GB drained and then ideally a 3 cm incision made in the GB fundus or, for smaller GBs, the length of the fundus. A corresponding incision is made on the anti-mesenteric border of the duodenum; these two incision sites can then be apposed. Two separate rows of 4/0 1.5 m or 5/0 1 m monofilament absorbable suture material in a simple continuous pattern either side of the proposed stoma are used to complete the anastomosis.

Any potential leakage gaps around the anastomosis are filled with simple interrupted sutures as required. A well-executed one-layer closure is all that is required (Figure 9). An additional suture can be placed cranial and caudal to the anastomosis to relieve any tension. The jejunum is used instead of the duodenum if there is likely to be undue tension on the proposed anastomosis site. A cholecystojejunostomy does mean though that there is minimal bile entering the duodenum, predisposing to duodenal ulceration. An oesophagostomy tube for enteral support in these chronically ill patients should be considered essential (Figure 10).

**Cholecystectomy**

Removal of the GB is indicated to remove and prevent further formation of choleliths that are causing a clinical problem and to treat biliary mucoceles. This means that bile will flow from the hepatic ducts into the CBD and straight into the duodenum; there is no longer a storage vessel for bile. Never underestimate just how different the biliary system can appear from an anatomical diagram, at least on initial inspection; where a rupture to the GB is present, all you may see is the tip a swollen GB and a convoluted, often dilated extra hepatic biliary tree. Careful dissection, breaking down of any adhesions between the abdominal wall, liver, GB,
omentum and thoughtful use of soaked abdominal swabs with a scrubbed assistants retraction, will allow the situation to slowly become clearer.

A stay suture can be placed into the GB to aid retraction, however, if there is not a solid mucocele content, bile may leak via the stay suture site (Figure 11). Using a careful combination of blunt and initial sharp dissection to get the blunt dissection plane started, the GB is peeled away from the hepatic fossa. The fossa will bleed, so just apply pressure and leave a soaked swab in the fossa, which will encourage haemostasis. At the end of the surgery, removal of the swab will stimulate bleeding, so use a haemostatic collagen sponge so it can be left within the hepatic fossa. If possible, identify the cystic artery and use diathermy for haemostasis. Often in patients with a partially ruptured biliary mucocele, there can be a lot of adhesions around the GB, making cystic artery identification difficult for the application of a ligature or haemostatic clip. Carefully dissect the cystic duct to the level just above the CBD, apply double haemostatic clips or ligatures to occlude the cystic duct, then transect above those clips or ligatures and remove the GB. The author only uses haemostatic clips for this procedure and it is important to ensure enough cystic duct length is used for clips or ligatures to be applied so that they are secure and not going to migrate, as this may cause bile leakage. It is also important that the clip length goes beyond the cystic duct width, so the tips of each clip compress together (Figure 12).

Once the GB has been removed, bile should flow from hepatic ducts through the CBD and into the duodenum. However, the CBD may also be distended, possibly containing lumps of mucoid bile deposits, so ideally, it is reassuring to check that the CBD is patent and some of the accumulated bile can be aspirated. This checking process does, however, add surgical/anaesthesia time to an already debilitated patient and it is advisable to make the decision on whether to perform a duodenotomy to catheterize the CBD on a patient-by-patient basis. Often the CBD is quite easy to catheterize in patients with choledoliths or a mucocele and the amount of accumulated bile aspirated to reduce distention can be disappointing, giving a feeling of nothing much achieved, yet surgical time prolonged.

In human patients – where a GB is commonly removed by laparoscopy – the bile flow in the CBD is checked by minimally invasive imaging using...
endoscopic retrograde cholangio-pancreatography. In canine patients, where laparoscopic cholecystectomy can be offered, it is imperative that patients are selected for non-complicated presentations, with no signs of rupture of the extra hepatic biliary tree or distension or obstruction of the CBD, as endoscopic contrast imaging of the CBD is not a technique readily available. More complex presentations are better suited to open cholecystectomy, where the patency of the CBD can be assessed if deemed necessary.

If you are going to catheterize the CBD, remember this is more easily done via the duodenal approach. If it is attempted via the transected cystic duct, this duct can be friable, shred, and bile will be split but more importantly the transected cystic duct will be fragile tissue for the haemostatic clips or sutures to purchase. This is particularly relevant when cholecystectomy is performed for GB mucocoeles. Finally, samples of bile and GB wall can be sent for bacterial culture, antibiotic sensitivity and histopathology. Again, in chronically debilitated patients, always consider placing an oesophagostomy tube. The author almost routinely places this support accessory in these patients – they can easily be removed if not required, but another general anaesthesia will be necessary to place if anorexic postoperatively.

Outcome and prognosis
When surgery is indicated for the biliary system it is often due to a chronic underlying inflammatory process, so although we are aiming to improve the bile flow, the surgery is not correcting the underlying conditions. For this reason the prognosis has to be cautious to guarded in a large percentage of patients. Cats with EHBTO undergoing biliary diversion surgery have an overall high mortality rate of 40%. These patients may not have suffered substandard surgical technique but often experience recurrent clinical signs of cholangiohepatitis, pancreatitis and chronic vomiting, which precludes a long-term quality of life. Dogs having a cholecystectomy for biliary mucocoeles generally do well and a prior rupture of a mucocoele does not preclude a successful outcome.

For those attending the BSAVA Congress, Catherine will be lecturing on ‘How to approach surgery of the biliary tract’, on Thursday 6 April, 14:05–14:50 in Hall 5, ICC.

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Edited by: John Williams and Jacqui Niles

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Homeopathy
Informing the debate

Few subjects create such heated discussions among veterinary surgeons as the use of homeopathic remedies in animals. A decade ago, a trio of vets with very different backgrounds began a project that they hoped would shine some light on the subject. John Bonner asked how they fared.

A better understanding

"If you look at the letters pages in the veterinary press, then you will see that homeopathy is as divisive and polarizing a subject now as it was 10 years ago when we started this task. I became involved because I was frustrated that such strong opinions were bandied around without seemingly any attempt to find a basis for better understanding between the two sides. Our goal was to explore whether it was possible to collaborate in research that would provide information for a more balanced discussion."

Although Andrew was sceptical about the clinical value of homeopathy in animals, he was curious about the methods that Chris Almond had begun using in a
neighbouring mixed practice in Masham. They joined up with Mark Holmes from the University of Cambridge veterinary school to develop an experimental protocol that would subject homeopathic treatments to the rigorous examination of a randomized, placebo controlled, double blinded clinical trial – the gold standard in evidence-based veterinary medicine.

**Academic trial**

Dr Holmes was then, as now, the director of the Cambridge Clinical Research Outreach Programme, which aims to involve first opinion practitioners in original research that will answer questions of immediate relevance to themselves and their colleagues. In this case, the question was ‘does homeopathy work in treating feline hypothyroidism or, at least, perform as well as the available conventional treatments?’

This disease was chosen because it is seen regularly in general practice and has a clearly defined clinical presentation, based on elevated levels of T4 thyroid hormone in the blood.

After consulting with a range of experts in several relevant fields – endocrinology, homeopathy and research ethics – the trio developed a study protocol that they felt was successful in combining the stringent demands of a randomized control trial with the highly individualized approach taken by veterinary homeopaths to assessing and treating their patients.

The trial would aim to recruit the owners of cats with confirmed thyroid disease based on tests at a commercial laboratory showing T4 measurements of 66 nmol/l or higher. The owner was asked to fill out a detailed questionnaire about their animal, which was sent to Chris Almond, who would propose a treatment based on a sarcode thyroidinum (a standard homeopathic preparation derived from healthy animal tissue and claimed to address the main clinical signs associated with hyperthyroidism) and an appropriate individualized similimum (a homeopathic medicine most similar to the constitution and totality of clinical signs shown by that particular patient).

The cats were then randomized to receive either the preparation recommended by the homeopathic vet or a placebo, administered orally each day for a period of three weeks.

In the second phase of the trial, the same cats received the standard (allopathic) treatment methimazole (Felimazole; Dechra) at a standard dose 2.5 mg twice a day again for three weeks. Their T4 levels, body weight and heart rate were recorded on entry into the trial and at the end of both phases.

Recruiting the 40 cats that were eventually enrolled in the trial took from 2006 to 2012, rather longer than the organizers would have wished. They had originally hoped that other practices would participate in the study but in the end, nearly all the animals examined were those presented at the two home practices.

As is customary in such trials, the identities of the animals in the treatment and placebo arms were not revealed to the participants until after the study was complete and the results analysed, in order to avoid conscious or unconscious biases.

**All about results**

Even those that have not been following the homeopathy debate too closely over recent times would probably be able to guess the nature of the results from the fact that the paper appeared in a journal serving the UK veterinary profession – rather than an international publication covering the broader scientific community.

The study showed that the individualized homeopathic remedy was no better than a placebo in reducing levels of T4 hormone in the first phase of the trial. In the second, methimazole was consistently effective in lowering T4 levels and this was accompanied by the expected improvements in reduced heart rate and increased body weight.

As a traditionally trained veterinary surgeon, Dr Holmes was unsurprised by those findings but cautions against overestimating the likely impact of a single study. He even admits to a little disappointment that they didn’t come to a different conclusion. “From a career viewpoint, it would have been good for me to have my name on a paper in Nature or Science that overturns everything we understand about the way that the body works – many people have tried but nobody has succeeded.”

Andrew Bodey is also a little regretful that they weren’t able to prove a beneficial effect. “It is wishful thinking to assume that conventional therapy has all the answers. With thyroid disease, for example, the available treatments all have their disadvantages. There are significant side effects with the drugs, surgery presents obvious risks and using gamma radiation in fairly high doses isn’t without its drawbacks.”

“If we had been able to show a positive effect from homeopathy, then that would have been great. There are no side effects, the treatment would be fairly inexpensive and it could easily be made more widely available.”

**Disappointments**

Of the three authors, the one with the most regrets is Chris Almond. Clearly, the trial failed to demonstrate any benefits for methods that he says he has used successfully since retiring from mainstream practice in 2007. Speaking just a few days after the
Chris Almond says he was also uncomfortable with the three-week duration or therapy set in the trial protocol. However, that was necessary to receive approval from the University of Cambridge research ethics committee, which set a number of conditions for the trial. It decided that the three-week limit was necessary to ensure the welfare of the animals in the placebo arm of the trial, as animals with a chronic, progressive disease could not be allowed to go untreated indefinitely.

In any case, Dr Holmes points out that John Saxton, the senior homeopathic vet consulted over the trial design, did advise that previous studies on homeopathy suggested that this would be an adequate time in which to demonstrate some effect.

Mr Almond’s third concern about the trial protocol is more problematic – the experience of participating in the study has shown him that the randomized controlled trial format is simply not suitable as a test of homeopathic methods, he says.

In response, Dr Holmes argues that irrespective of what methods they use, all vets need to be able to show that they work. That is essential to justify the professional monopoly that they enjoy over the treatment of animals. “Don’t forget that vets used to be regarded by the public as quacks. That change was a result of basing our training and practices on a scientific philosophy that requires empirical testing and has delivered tangible benefits – from smallpox vaccines to the mobile telephone.”

Dr Holmes acknowledges that the format of the trial was not perfect, as that is a difficult standard to set for any study, particularly for one that was carried out without any external funding. “In a perfect world we would have randomly selected the cats and randomly assigned them to a randomly selected homeopath.”

Despite those limitations, all three participants agree that the study was a much-needed and largely successful attempt to look for some common ground between the two rival camps.

One of the main flaws in the trial design was the questionnaire.

Chris Almond says he was also anticipating a hard time from his own colleagues in the veterinary homeopathy community.

“There have been a few comments already on the International Association for Veterinary Homeopathy forum. They were very critical of the way the trial was carried out and I can’t really disagree with the points that they were making. I don’t think I am going to be very popular.”

One of the main flaws in the trial design was the questionnaire. which he feels was an inadequate replacement for the lengthy discussion that would normally take place between client and clinician in a standard homeopathic consultation. He says the quality of responses from clients in the questionnaire was often “pretty poor” and made it difficult for him to determine the best individualized treatment for each animal.

The questionnaire approach was chosen as a way to avoid causing stress to the animal during a long journey to the practice, although most of the cases were recruited locally. Mark Holmes acknowledges that using a questionnaire to assess an animal’s general demeanour was “suboptimal” but argues that the methods chosen were a “sensible attempt” to individualize treatment. He notes that the choice of remedy was made in part using a computer program widely used by other homeopaths.

Irrespective of what methods they use, all vets need to be able to show that they work.

In the name of EBVM

As a pioneer of evidence-based veterinary medicine in the UK, Dr Holmes insists that all vets should be prepared to take a critical look at their methods. This was the second study on veterinary homeopathy in which he has participated – an earlier trial looked at a treatment for mastitis in dairy cattle – and he would be willing to help in designing more.

“No, this is not the final nail in the coffin for veterinary homeopathy; all we have demonstrated is that with this particular disease and under these conditions, those methods are ineffective. That doesn’t necessarily mean that they can’t be useful in other circumstances.”

Andrew Bodey points out that, for the moment, their published study is a global first – the best ever investigation into the use of homeopathic methods in treating feline thyroid disease. “But that is testimony to just how little data there is out there.”

He would be happy to relinquish that title when other researchers have completed follow-up studies. His only caveat would be that those colleagues must approach their task with the same fair-minded approach that drove his own work.

“If the purpose of your efforts is to justify your own opinions rather than to answer a legitimate question, then that is not going to work. I’d encourage both sides in this debate to try to collaborate rather than argue. We need to address the ethical consequences of our decision to use, or not to use, homeopathic treatments. And remember the human mind is like a parachute – it works best when it is open.”
Infectious diseases: what bugs are emerging this year?

Date 18 April 2017
Speaker Simon Tappin
Venue Cranage Hall, Cheshire

Pet travel has led to the importation of many animals with previously exotic diseases such as Babesia, Leishmaniosis and Ehrlichia, some of which have been reported in the UK in animals that haven’t travelled abroad. We will consider the reasons for this, the changes in vector prevalence and the best preventative strategies for animals that are travelling abroad.

Orthopaedic trauma: the first 24 hours

Date 25 April 2017
Speaker Ciara Downes
Venue The Capital Venue, Gloucestershire

This one-day course will aim to cover all the basics of initial patient assessment and stabilisation, through more detailed orthopaedic and neurological assessment. We will consider appropriate pain management, and first aid for open wounds and fractures. The use of dressings to provide temporary stabilisation (and pain relief) for unstable fractures will be covered – when they should be used, when they should NOT be used, and how to apply them.

Sneezing and wheezing cat

Date 27 April 2017
Speaker Nicki Reed
Venue Holiday Inn, Gatwick Airport

This course will cover investigation of upper and lower respiratory disease in cats. We will cover diagnosis and novel treatments, causes and management of various respiratory problems.

The day will finish with an interactive look at some case studies.

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One of the key aims of the Royal College of Veterinary Surgeons’ (RCVS) Mind Matters Initiative (MMI) has been to support and facilitate research around mental health within the veterinary profession as well as look at research and best practice for related professions. Two years after its launch the Initiative held a research symposium to bring together academics and researchers working in this area to share their insights and best practice.

The inaugural Mind Matters Research Symposium, held at the University of Edinburgh on Friday 20 January 2017, was attended by almost 100 people – including practising veterinary surgeons and veterinary nurses as well as academics and researchers – who came along to hear some of the latest research into the subject of veterinary mental health and wellbeing.

The symposium was organized with Rosie Allister, Chair of the Vet Helpline and Director of Vetlife, and was introduced by Neil Smith, former RCVS President and current Chair of MMI, and had the overall theme of ‘understanding and supporting veterinary mental health’.

In his introduction Neil relayed to those attending the five main streams of activity for MMI: research and best practice; culture change; direct intervention; supporting the supporters; and leadership. He also stressed the pan-professional nature of the project with its support from a number of organizations including the British Veterinary Association, British Veterinary Nursing Association, the Association of Veterinary Students, the Veterinary Schools Council and the Society of Practising Veterinary Surgeons among others.

The floor was then opened to the first of the plenary speakers – Professor Stephen Platt from the University of Edinburgh who spoke about the concept of ‘suicide clusters’, which can be loosely defined as a group of suicides in close proximity, whether that proximity is defined by geography, profession, time span or otherwise – and how it relates to the veterinary profession, although he pointed out that there is generally no consensus of what constitutes a suicide cluster or how to identify them and that, therefore, more research was needed.

Comparisons with the medical profession
The next speaker was Professor Debbie Cohen from the Centre for Psychosocial Research, Occupational Health and Physician Health at the School of Medicine at Cardiff University, who spoke about disclosing and assessing mental ill-health within the medical profession. Like the veterinary profession, Professor Cohen noted that both medical students and qualified doctors have higher rates of mental ill-health and suicide than the general population and are at greater risk of ‘burnout’, which she defined as a syndrome of a poor workplace comprising three things – emotional exhaustion, depersonalization and inefficiency.

Professor Cohen told the delegates that, having conducted a 3-month survey on issues around disclosure of mental ill-health, there were relatively low levels of knowledge among doctors about the options they had for disclosure and support services available. This research has now led to her developing a tool that will support earlier disclosure and empower people to talk about their mental health problems, citing the fact that it is far better to disclose early than when a person reaches a crisis point.

Mental wellbeing at work
The third plenary speaker was Chris O’Sullivan, Head of Workplace Mental Health at the Mental Health Foundation, who spoke about how to protect and improve mental health at work. During his talk, Chris pointed out that there was a clear hard-headed business case for improving workplace mental health in terms of retaining talent, improving performance and maximizing the bottom-line and that studies by the Mental Health Foundation have demonstrated that there is return on investment for
companies that institute workplace mental health support programmes. He added that this applies for society and the economy as a whole, as those who have a mental health condition added £226 billion to the UK economy in 2015. Overall research by the Mental Health Foundation recommended that businesses and organizations need to value mental health and wellbeing as a business asset, develop effective line management relationships, address discrimination, support disclosure and value the diversity and transferable skills that result from workers’ experiences of mental ill-health.

After the plenary speakers, the rest of the day comprised a series of four ‘short-talk streams’ in which academics and researchers gave 15-minute talks on their area of study. These talks were the result of a call for papers 2 months prior to the event and the college was delighted with the number and diversity of responses received. Topics discussed included the humour-types evidence within UK veterinary practice, the transition from vet student to veterinary surgeon, embedding resilience training into the veterinary curriculum, how veterinary nurses cope with stress in practice and the effectiveness of mindfulness-based webinars for veterinary professionals.

Setting priorities

The day ended with an overview of what had been discussed and a workshop by Lizzie Lockett, MMI Director, for which delegates were asked to prioritize what they thought were the most important areas of veterinary mental health research for the future. Suggestions included the impact of physical exercise on mental health, what is ‘normal’ in terms of perceptions of stress in practice, and whether a peer-support programme could work on a national basis.

Speaking of the day, Lizzie said, “The Mind Matters initiative Research Symposium was a groundbreaking day that gave those working and those with an interest in this area the opportunity to share research, ideas and experience. “A collaborative and positive spirit was evident throughout the day, demonstrating that a community is being developed in this area that can share and discuss ideas, develop solutions and conduct future research.”

“While research into this area may be at a relatively early stage, the day demonstrated that there is a very real desire to improve our knowledge and, by doing so, better understand the causes of mental ill-health in the veterinary professions and the treatment and preventative measures that can be put in place to reduce the stigma and help people before they reach a crisis point.”

For further information about the Mind Matters Initiative and the Research Symposium visit www.vetmindmatters.org and follow @vetmindmatters on Twitter.

And don’t forget ‘&me’

Continuing the Mind Matters theme, on Tuesday 31 January, at the Palace of Westminster, we launched our joint ‘&me’ mental health stigma campaign with Doctors’ Support Network, which provides peer support for doctors and medical students with mental health concerns.

The event was sponsored by Kevan Jones MP (Labour, North Durham) and featured prominent members of the veterinary and medical community talking about their own struggles with mental ill-health in order to tackle stigma and encourage others from the health professions to seek help. By reducing stigma and showing that it is possible to continue to flourish in your career, it is hoped that these role models will help those who are not yet seeking help, or who are struggling with their diagnosis, to speak to appropriate people.

Powerful testimony

One of the powerful personal testimonies at the event was that of David Bartram, a member of RCVS Council and Director of Outcomes Research for the international operations of the largest global animal health company, who gave his perspective on coming to terms with a mental health condition in a profession that still attaches stigma to mental ill-health.

What started as worry, early waking and palpitations – which I recognized – led to patterns of thinking which I did not recognize as being disordered. I felt trapped and worthless – suicide was the only escape. From a medical perspective, my biological, social and psychological risk factors had converged and tipped me into major depression.

“That was the first of multiple suicide attempts and several prolonged stays in hospital. Over a 3-year period I spent 12 months as a psychiatric inpatient. I was treated with antidepressants, antipsychotics, mood stabilizers, talking therapies and electroconvulsive therapy.

“But now thankfully I am well – and I have been for 14 years... To what do I attribute my recovery? A mixture of medical treatment, psychological therapies, supportive friends and family, rest and time – they all contributed, probably in similar measure.”

He added that while his episode of mental ill-health does not define him, it has changed him in a positive way and that no one is immune from it.

If you are a senior veterinary professional and wish to speak about a past struggle with mental ill-health, then we would like to hear from you. In the first instance you should contact Louise Freeman, Vice-Chair of Doctors’ Support Network, to discuss your story on vicechair@dsn.org.uk. Keeping everyone safe is our priority and so we are not seeking to publish the personal stories of those who are currently or recently unwell.

At BSAVA Congress

If you are at this year’s BSAVA Congress, there are three mental health-themed talks for you to attend from the Mind Matters Initiative, all of which take place on Saturday 8 April.

The first talk, entitled ‘Blame and shame: lost learning in the veterinary profession’, takes place from 08:30–10:30 and is presented by Catherine Oxtoby, Risk Manager at the Veterinary Defence Society, and Lizzie Lockett. The second talk is about research into occupational stressors in veterinary practice by Dr Elinor O’Connor from the Alliance Business School at the University of Manchester and takes place from 16:50–17:35. This is followed by a talk entitled ‘Resilience: What does it really mean?’ by Richard Dorney MBE, the Director of Strongmind Resiliency Training, between 17:45–18:30.

To find out more about the campaign please visit www.vetmindmatters.org/&me
Sue Murphy was born in Northamptonshire and comes, she says, from solid working-class stock – her father was a builder and her mother a school cook. She has one brother, who is a successful businessman. She is a specialist in clinical oncology at the Animal Health Trust in Newmarket and has now become Chair of the BSAVA Congress Programme Committee.

**Sue Murphy**

**HOW DID YOU COME TO CHOOSE A VETERINARY CAREER?**

At 16 years old, I won a scholarship to an international sixth form college called Atlantic College (AC) in South Wales, where I studied with something like 180 students of about 68 nationalities for the International Baccalaureate (IB). AC was heavily into community service and, among other things, ran the RNLI station at St Donat’s. We had a rigid hull inflatable that had been developed at the college and subsequently was used throughout the UK by the RNLI (and still is) called the Atlantic 21. I spent a disproportionate amount of time bouncing around the Bristol Channel in a boat, which was fabulous, but that didn’t do much for my predicted grades. In fact, I was told by the director of studies that I would not get a place to study veterinary medicine and not to bother applying. Therefore, I chose to do agriculture. I did better than anticipated at the exams and, after several months working on a farm in my gap year, I realized I wasn’t a farmer. I wrote to Edinburgh to see what they thought about me getting on to the veterinary course. They said reapply, so I did and ended up being accepted with my grades as they were. This gave me a massive inferiority complex as I thought all the other people had got brilliant grades and I had got in because the admissions people didn’t understand the IB. So I worked my socks off in the first year until it became obvious I was going to be OK.

**HAD YOU ALWAYS WANTED TO BE A VET OR DID YOU HAVE OTHER CHILDHOOD AMBITIONS?**

I always had pets and was a keen horse rider. I read James Herriot when I was about 13 and that was it.

**YOU GRADUATED FROM EDINBURGH IN 1986 – WHAT WAS YOUR NEXT MOVE?**

I wanted to be a female James Herriot, so I went into mixed predominantly large animal practice, for two years. It was a two-man practice so I was working very long hours, especially during lambing, which I loved. I then moved to Essex for a short period to an exclusively small animal job and then went travelling to India, Thailand and Malaysia for six months. Then I came back to settle down into a mixed predominantly small animal practice in the Cotswolds. By this time, I had worked out that small animal work was the right thing for me. After six years in the Cotswolds, I got married and we ended up in North London. I worked in a practice where Malcolm Brearley had seen practice as a student. Malcolm was one of the first Royal College specialists in oncology and was then working at the Animal Health Trust. The practice always referred oncology cases to him and there was always a treatment plan. The animals seemed happy and lived longer than I would have expected. When I was taught about cancer as an undergraduate, it was as part of the pathology course and the implication was the animal was either dead or the tumour had been removed surgically. The idea that you might want to do something more was pretty novel.
YOU MOVED TO THE TRUST IN 1997: WHAT HAS HAPPENED SINCE?
I started at the AHT in 1997 as a helping hand for Malcolm as his resident at the time was on maternity leave. I came to understand how a referral hospital worked and never left, apart from maternity leave for my second daughter. I started my residency proper in 1999, gained an MSc in clinical oncology, then ran the oncology unit after Malcolm left. I became a DipECVIM-CA (onc) in 2007 and RCVS specialist in 2008. I became head of the small animal clinic at the AHT in 2010 and then head of both small animal and equine in 2013.

When you see an animal who was given a guarded prognosis live a long and happy life it’s pretty great

WHAT DREW YOU TOWARDS ONCOLOGY AS A SPECIALISM?
I have always liked building relationships with people and their animals, and helping them on their cancer journey is pretty special. When you see an animal who was given a guarded prognosis live a long and happy life it’s pretty great, but supporting people in making good decisions for their animal is equally important. The aim of the oncologist is to firstly improve quality of life and then secondarily to extend life. Sometimes that extension isn’t a cure. It’s a time-buying exercise, but as long as the animal is happy and the owner understands the limitations of what we are doing that is OK.

WHO OR WHAT HAS BEEN THE MOST SIGNIFICANT INFLUENCE ON YOUR CAREER?
Malcolm Brearley as he was an inspiration in terms of offering positive possibilities following a cancer diagnosis.

WHEN DID YOU BECOME A BSAVA VOLUNTEER AND WHY?
I was asked to organize the oncology and clinical pathology streams at Congress by Laura Blackwood. I was very impressed by the way the committee worked and amazed at how smoothly everything went although, like swans on a river, there was a lot of frantic paddling going on below the surface.

WHAT EXACTLY DOES THE ROLE INVOLVE?
You are responsible for ensuring the committee sorts out the content of the Congress from an educational point of view. That is the streams, veterinary, nursing and management, the cutting-edge clinical research abstracts and posters that will signpost the veterinary practice of tomorrow, the small group seminars, and the dry labs and wet labs. The committee is made up of other volunteers – nurses, vets and managers, who all work hard to come up with interesting and useful topics that can be delivered by people at the top of their game. Invites, lecture notes, research abstracts and posters all have to be delivered in a timely fashion and checked. All this is guided by the full-time staff at BSAVA. It’s a big job and it would be impossible without everyone doing an awful lot behind the scenes, on top of their day job.

WERE YOU A REGULAR AT BSAVA CONGRESS BEFORE BECOMING INVOLVED IN HELPING TO RUN THE ORGANIZATION?
I had visited the BSAVA Congress when I was in practice, and also had been invited as a speaker.

DO YOU HAVE ANY MEMORIES OF PREVIOUS MEETINGS THAT PARTICULARLY STAND OUT – FOR GOOD OR BAD?
Mostly good – I particularly remember Robert Winston and Richard Dawkins as keynote speakers.

WHAT IS THE MOST SATISFYING ASPECT OF YOUR WORK AT THE AHT? AND THE LEAST?
The most satisfying part of my job is related to helping people, be that giving advice to vets in practice about how to treat an animal we will never see, helping my colleagues at the AHT achieve their aims, or helping clients. I have been around long enough now to be receiving thank you letters from owners of dogs and cats we treated sometimes over 10 years ago, whose animals have lived out a normal life span. I find it amazing that these people remember us and thank us all that time later. The least – when clients complain. We don’t get too many but, as head of clinics I am involved in all of them. I find this is usually related to communication in some way. Usually the client’s expectations didn’t match the clinician’s, either in outcome or in cost, and somewhere along the line that mismatch happened and trying to repair the relationship can be challenging.

IF YOU COULD GO BACK, WHAT PIECE OF ADVICE WOULD YOU OFFER YOUR YOUNGER SELF?
Don’t worry so much!

WHAT ARE YOUR SOCIAL INTERESTS?
I sing with the village choir, and have been a stalwart of the village pantomime for years. We aren’t actually too awful – we won a national award a few years ago. My daughters have taken up a fair amount of time until recently, especially my younger one, who played Rugby Union at quite a high level until she was 17 and plays touch rugby at international level. I am an aficionado of cheap hotels as we have trekked all over England for years. We aren’t actually too awful – we have trekked all over England for years. We aren’t actually too awful – we have trekked all over England for years.

Sue with their family rescue dog Milo.
CONSIDER THIS CASE: A COUGHING CROSS-BREED

Naomi Earley, resident in Diagnostic Imaging at the University of Edinburgh, invites Companion readers to consider a coughing cross-breed which she saw in practice and was evaluated at the Queen’s Veterinary Hospital, University of Cambridge.

Clinical conundrum

Case presentation

A 10-year-old female entire cross-breed dog presented for further investigation of a cough that had been worsening over a 6-week period. The patient was fully vaccinated and had previously had two mammary masses removed from her fourth and subsequently fifth right mammary glands; a low-grade mammary duct carcinoma was subsequently reported. The cough was associated with both pulling on the lead and jumping off furniture. The cough had originally been left untreated for 3 weeks but gradually became more frequent in nature (up to 12 times a day). The dog commenced a 7-day course of co-amoxiclav (12.5 mg/kg p.o. q12h), which resulted in no improvement. Over this period the dog lost 1 kg body weight.

On clinical examination, the dog was bright and responsive. The dry cough could be elicited on tracheal pinch. She was panting and her pulse was regular with a heart rate of 124 bpm. Her mucous membranes were pink with a capillary refill time of 1–2 seconds. Rectal temperature was 39.1°C. Thoracic auscultation revealed absent lung sounds and muffled heart sounds on the right side. Abdominal palpation was unremarkable but there was mild discomfort during the examination. There was a firm subcutaneous soft tissue mass (3 mm in diameter) associated with the right fourth mammary gland.

Create a problem list based on the history and clinical examination for this patient

- Cough
- Weight loss
- Absent lung sounds on right side
- Reduced heart sounds on right side
- Mammary mass

What are the differential diagnoses for the reduced heart and lung sounds?

- Pleural space
  - Pneumothorax (traumatic/spontaneous)
  - Pleural effusion
  - Neoplasia
- Lower respiratory tract
  - Space-occupying lesion e.g. neoplasia, granuloma, abscess, cyst, haematoma
  - Atelectasis/consolidation e.g. inflammation (fibrosis, granuloma), foreign body, pneumonia (viral, bacterial, parasitic, aspiration), oedema, infiltrative disease, lung lobe torsion, haemorrhage
- Cardiovascular
  - Pericardial effusion
  - Neoplasia
  - Pericardial cyst

What initial investigations would you perform?

Blood samples were taken for routine haematology and biochemistry (Tables 1 and 2). The dog was anaesthetized, a swab of mucus seen around the epiglottis was taken and sent for culture and sensitivity (unremarkable). Thoracic radiographs were performed.

Describe the radiographic findings

The radiographs revealed a soft tissue mass occupying most of the right middle lung lobe (Figure 1A, 1B). There is a mediastinal shift to the left (Figure 1A). There is an increased opacity in the right cranial lung lobes, most likely due to compression. The right main stem bronchus is displaced to the left (Figure 1A). The left main stem bronchus is wider than the right and displaced dorsally as well as the carina (Figure 1C). The caudal liver lobes extend beyond the costal arch and are rounded (Figure 1B, 1C). Another possible differential for the radiographic findings other than a thoracic mass is lung lobe torsion; however, there is no visible radiographic sign of a pleural effusion.

The cough and reduced heart and lung sounds were most likely caused by the mass in the thorax.

What is your revised differential diagnosis list for a thoracic mass and what would you do next?

- Mediastinal neoplasia e.g. lymphoma, thymoma
- Primary pulmonary neoplasia e.g. adenocarcinoma
- Metastatic pulmonary neoplasia e.g. previous mammary neoplasia, undiagnosed primary neoplasia
- Cardiovascular neoplasia e.g. chemodectoma, haemangiosarcoma
An abdominal ultrasound was performed for oncological staging, which was unremarkable.

Ultrasound-guided fine-needle aspiration (FNA) was performed to take a sample of the mass. Cytology of the thoracic mass revealed necrosis and clusters of epithelial cells were suggestive of a thymoma. A final diagnosis could not be made due to the necrotic cells.

Due to the conflicting radiographic and cytology results, where the radiographs suggest a lung mass and the cytology suggests a thymoma, a thoracic computed tomography (CT) scan was performed under general anaesthesia.

Describe the CT findings

The thoracic CT shows a large, round, hyperdense, contrast-enhancing and heterogenous mass present in the mid and caudal aspect of the right thorax, causing a mediastinal shift to the left, displacing and compressing the caudal vena cava (Figures 2A, 2B). The mass is likely to be in the right middle lung lobe. The right middle lung lobe is collapsed. There are also two round, hyperdense nodules present within the parenchyma of the right cranial lung lobe (Figures 2C, 2D). There is an interstitial to alveolar pattern present in the left lung lobes due to the mediastinal shift (Figure 2E).

An abdominal ultrasound was performed for oncological staging, which was unremarkable.

Conpercussion

The most likely diagnosis was neoplasia of the right middle lung lobe with possible metastases in the right cranial lung lobe.

Further investigations that could be considered given the non-diagnostic FNA cytology findings could be CT-guided FNAs or thoracoscopic biopsies. Alternatively, a thoracotomy or thoracoscopically assisted pulmonary surgery (TAPS) with biopsy and/or resection of the mass could be considered.

How would you treat this dog?

The dog underwent an exploratory thoracotomy by median sternotomy. The right cranial and middle lung lobes were removed using a stapling device. There were several nodules present within the pericardium and pleura, therefore a pericardectomy was also performed.
performed. The lung lobes and pericardium were sent for histopathology. Postoperatively the dog received meloxicam (0.1 mg/kg p.o. q24h) for 14 days and had restricted exercise that was gradually increased over 6 weeks.

Histopathology of the mass revealed a carcinoma. There were also masses and neoplastic tissue within the submitted pericardium, pleura and in the right cranial lung lobe. The tissue of origin was unclear; it could have been from a primary lung tumour or metastasis from the previously removed mammary carcinoma. Immunohistochemistry confirmed the tissue of origin to be epithelial, meaning the mass was more likely to be primary lung tumour; however, metastases from a different mass of epithelial origin e.g. thyroid or parathyroid could not be excluded.

What is the likely prognosis?
Prognosis for primary lung tumours is variable. A well-differentiated primary lung tumour with no clinical signs and no metastasis to regional lymph nodes has a more favourable prognosis. A study by McNiel et al. (1997) found that the disease-free interval in dogs was 493 days for well-differentiated primary lung tumours, 191 days for moderately-differentiated tumours and 0 days for poorly-differentiated tumours. Polton et al. (2008) found that if the primary lung tumour was stage 1 with no metastases and of a papillary type, the patient had a more favourable prognosis with a median survival time of 555 days.

Treatment options were discussed with the client. Repeat thoracic radiographs 3 weeks postoperatively showed no signs of metastasis. Haematology, biochemistry and urinalysis were performed prior to starting the dog on toceranib phosphate chemotherapy (3.25 mg/kg p.o. every other day).

Outcome
The dog returned for re-examination 5 weeks postoperatively. She had an intermittent cough but the frequency was significantly reduced when compared with the cough prior to surgery. Repeat haematology, biochemistry and urinalysis were performed. She had developed a urinary tract infection and was started on a course of co-amoxiclav (12.5 mg/kg p.o. q12h) for 14 days. At re-examination 9 weeks postoperatively she was still doing well with an infrequent cough. Repeat haematology and biochemistry were unremarkable. The urine protein/creatinine ratio was elevated which could suggest a protein-losing nephropathy that may or may not be linked to treatment with toceranib phosphate. She was continued on treatment with toceranib phosphate. Unfortunately she presented as an emergency with acute onset dyspnoea 12 weeks postoperatively. Thoracic radiographs and ultrasound revealed pleural effusion and numerous masses within the pleura and lung, consistent with progression of her intrathoracic carcinoma (Figure 3). She was euthanized at that time.

FIGURE 2: (A,B) Transverse CT images of the thorax with contrast enhancement (soft tissue algorithm). (C,D,E) Transverse CT images of the thorax with contrast enhancement (lung algorithm).

FIGURE 3: Thoracic ultrasound showing round hypoechoic mass adjacent to the thoracic wall.

Acknowledgement: The author would like to thank Charles Pittaway and the imaging department at the Queen’s Veterinary School Hospital for their help with this Clinical conundrum.

References and further reading are available online and in e-Companion.
Regional accents

Cocktails, cadavers and canapés!
The Metropolitan BSAVA Region would like to invite you to celebrate 60 years of the BSAVA at the Royal College of Surgeons, Lincoln’s Inn Field, London. On Friday 19 May, the evening will begin at 19:30 in the Hunterian Museum. The museum boasts unrivalled collections of human and non-human anatomical and pathological specimens, models, instruments, paintings and sculptures that reveal the art and science of surgery from the 17th century to the present day. There will be a talk given by a member of the RCS on the contents of the museum. Enjoy a chance to meet the vets and nurses of the region with a glass of wine. Partners welcome. Tickets (£20) can be bought via the BSAVA website. Book your place now as there will be limited availability.
Esther Bijsmans, Metropolitan Chair

Red or dead in the North East?
Next up for BSAVA NE region in 2017 is an evening on immune-mediated disease and use of blood products. This meeting is aimed at nurses but all are welcome and we are delighted to have Louise O’Dwyer as our speaker. The meeting is to be held at Chantry Vets Ltd in West Yorkshire, on Wednesday 24 May. Book your place online.
Lucy Nowell, North East Committee Member

Southern region gives you nothing to cry about
A day of interactive lectures on management of ophthalmic emergencies will take place on 20 July in Wokingham. A deep ulcer, acute glaucoma, or a corneal foreign body – if these fill you with dread, then join us and Rachael Grundon, who will cover various approaches to take on managing challenging ophthalmic cases and give helpful and practical advice for general practitioners on these common presentations.
This day course is aimed at general practitioners wishing to improve their recognition and management of ophthalmic emergencies. The hope is that this will increase your confidence in dealing with ophthalmic cases and improve your management of them. The best is that you get a 20% discount on the course fee if you register before 25 May. Register online.
Krista Arnold, Southern Chair

North East explores blood testing
We were delighted to welcome both Nick Carmichael and Eddie Clutton for an evening on the controversial topic of pre-anaesthetic blood testing. The evening started with a romp through our Annual Regional Meeting while enjoying a delicious buffet and continued with a very stimulating lecture by both speakers highlighting the importance of advising clients carefully, planning blood samples in advance of scheduled procedures and considering the wording on consent forms – these were just some of the take-home messages.
Lucy Nowell, North East Committee Member

Louise Longstaff
South West Region Treasurer
I graduated from Bristol University in 2009 and went into small animal practice. After a few years, I decided I wanted a bit of a career change and started looking for jobs in the veterinary pharmaceutical industry. This meant I had to improve my CV with more skills than being a practising vet. I joined the South West committee in January 2014 after attending a CPD evening in the region and hearing that they needed volunteers. Up until then I had attended the BSAVA evening courses without realizing that they were organized entirely by volunteers. My initial motivation for joining the committee was to gain experience and enhance my CV. This seemed to work! I made the move into industry in July 2015 after spending almost a year in a research role at Bristol University. I became treasurer of the South West region in April 2016. The treasurer role and my day job complement each other nicely; I have learned plenty of skills from the BSAVA committee that I can apply to my current role. I have found being a volunteer very rewarding – everyone has been kind and welcoming. It has provided many opportunities that I would otherwise never have had the chance to do; how many of us can say they have had a crash course in data protection laws during an afternoon at Woodrow House? There is so much more to BSAVA than the annual Congress, and being a volunteer opens up many different pathways within the organization. Come and chat to us volunteers at the BSAVA stand at Congress to hear more about the volunteer experience.

VOLUNTEER VOICE

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Lucy Nowell, North East Committee Member
CPR for the team
When West Midlands region tried a new venue in Herefordshire and brought CPR to the county, they found the turnout way exceeded the booking, with chairs being pinched from the adjacent room and course notes being shared!
Matt Gurney had travelled down from Northwest Surgeons and not only did he give us the up-to-date evidence-based CPR but also discussed the best ways of avoiding getting to that point – by making the most of your anaesthetic monitoring equipment. He also gave us realistic outcomes if it did come to that. The event was a great success and here’s to more in Herefordshire.
Caroline Queen, West Midlands Chair

GP rabbit anaesthesia
BSAVA West Midlands came to Cheltenham for only the 2nd time on 24 January as Ivan Crotaz delivered a fantastic talk on Rabbit Anaesthesia in general practice. Almost 50 delegates were entertained and informed as Ivan covered everything from pre-anaesthetic husbandry to post-anaesthetic care with many tips and tricks to safe rabbit anaesthetics, whatever the budget.
From the superb feedback received on the night, this is definitely a course that we will run again in 2018. Delegates left with a clear plan that will reduce stress for rabbits, nurses and vets, and many delegates stayed behind to practise endotracheal intubation and V-gel placement after the talk.
Caroline Queen, West Midlands Chair

North East 60th Anniversary Party
The North East region hosted a ceilidh in Harrogate for its 60th anniversary celebration and invited faithful drug reps and families to attend. The cold weather was soon forgotten with an excellent hot buffet and a ceilidh provided by local band, The Stray Chords. The dance floor was filled for the entire evening, and the grown ups were properly outshone by the children – something to do with being better at following instructions, according to the caller. It was lovely to properly thank our reps who provide us with generous sponsorship at every meeting, helping us to offer affordable CPD in the region.
Lucy Nowell, North East Committee Member

Southern watches their blood pressure
The highs and lows of blood pressure were explored when Kit Sturgess gave a comprehensive and practice-oriented talk on how to spot the cases, measure the pressures and deal with the result. While there is a general tendency to focus on hypertension, Kit pointed out that hypotension can have much more immediately profound and life-threatening consequences to our patients. He further explained the impact and consequences of the use of NSAIDs and ACE inhibitors in hyper- and hypotensive patients. We all agreed that his overview of the available drugs for the treatment of blood pressure abnormalities was very helpful for daily practice. Kit pointed out the limitations of measurement and reminded us always to take a step back and use our clinical judgement if the treatment outcome does not meet our expectations, rather than just increasing the dose of the medication. A variety of case examples rounded off a very informative evening.
Krista Arnold, Southern Chair

Mental health in the Metropolitan Region
The Mind Matters meetings BSAVA has sponsored with RCVS have proved popular in all BSAVA regions, and the Metropolitan Region decided to organize two events on mental health during the past few months. The Mind Matters meeting focused on understanding mental health, mental health issues, and how to deal with others who have them, whereas the afternoon meeting that we held in January focused on thriving in practice – and how to take care of your patients and yourself. Carolyne Crowe was an excellent speaker who understands the daily struggles many of us have because of her background as an equine vet. Later this year we will have another event on mental health and we hope that this one will be equally popular. The more we talk about it, the more we can help each other and ourselves.
Esther Bijsmans, Metropolitan Chair

To book a place on a regional course, please visit www.bsava.com/cpd or call 01452 726700 for more information.
LEARN@LUNCH WEBINAR FOR VETS
Wednesday 12 April
Time: 13:00–14:00
Introduction to skin grafts
Jackie Demetriou
Details from webinars@bsava.com

WEST MIDLANDS
Wednesday 12 April
Reg: 19:30, Meeting: 20:00–22:00
Feline respiratory disease: how to make cats breathe easy
Ellie Mardell
Moseley Park, Wolverhampton
Details from westmidlands.region@bsava.com

BSAVA EDUCATION
Tuesday 18 April
Reg: 09:30, Meeting: 10:00–18:00
Emerging infectious diseases
Simon Tappin
Cranage Hall, Cheshire
Details from courses@bsava.com

NORTHERN IRELAND
Friday 21 April
Reg: 09:30, Meeting: 10:00–16:30
All you ever needed to know about ophthalmology
Jim Carter
Ramada Plaza, Belfast, Antrim
Details from nireland.region@bsava.com

BSAVA EDUCATION
Tuesday 25 April
Reg: 09:30, Meeting: 10:00–17:00
Orthopaedics: decision making in the first 24 hours
Claire Downes
The Capital Venue, Quedgeley
Details from courses@bsava.com

LEARN@LUNCH WEBINAR FOR VETS
Wednesday 26 April
Time: 13:00–14:00
Rabbit behaviour
Brigitte Lord
Details from webinars@bsava.com

bsava.com/education
WEST MIDLANDS
Thursday 18 May
Reg: 19:30, Meeting: 20:00–21:45
Feline geriatric medicine: the complexity of managing hyperthyroidism and concurrent diseases
Kerry Simpson
Willows Veterinary Centre
Details from westmidlands.region@bsava.com

BSAVA EDUCATION
Wednesday 24 May
Reg: 09:30, Meeting: 10:00–17:00
The itchy and scratchy cat
Peter Forsythe
Holiday Inn, Gatwick
Details from courses@bsava.com

LEARN@LUNCH WEBINAR FOR VNks
Wednesday 24 May
Time: 13:00–14:00
Nursing the recumbent patient
Elle Haskey
Details from webinars@bsava.com

NORTHERN IRELAND
Wednesday 14 June
Reg: 19:30, Meeting: 20:00–22:00
Behavioural considerations when neutering canine patients
Sarah Heath
Killyhevlin Lakeside Hotel and Chalets, Co. Fermanagh
Details from nireland.region@bsava.com

SOUTH WEST
Thursday 15 June
Reg: 19:00, Meeting: 19:30–21:30
Fracture planning in practice
Kevin Parsons
Cullompton Rugby Club
Details from southwest.region@bsava.com

NORTH EAST
Monday 19 June
Reg: 09:00, Meeting: 09:30–17:30
Mental health awareness training
Joint meeting with The Mind Matters Initiative
Trevor Bell
Macdonald Craxton Wood Hotel, Cheshire
Details from northeast.region@bsava.com

NORTH EAST
Wednesday 21 June
Reg: 19:30, Meeting: 20:00–22:00
Livers
Nick Carmichael
Carrwood Park, Leeds
Details from northeast.region@bsava.com

LEARN@LUNCH WEBINAR FOR VNks
Wednesday 21 June
Time: 13:00–14:00
Ophthalmology: using a split lamp
Claudia Busse
Details from webinars@bsava.com

SOUTHERN
Wednesday 21 June
Reg: 19:30, Meeting: 20:00–22:00
Brexit – the UK and exotic parasite control: legislation or education?
Ian Wright
Bayer House, Reading
Details from southern.region@bsava.com

BSAVA EDUCATION
Tuesday 13 June
Reg: 09:30, Meeting: 10:00–17:00
A practical approach to basic ESF and wire placement
Andy Moors
The Cambridge Belfry
Details from southern.region@bsava.com

BSAVA EDUCATION
Tuesday 13 June
Reg: 09:30, Meeting: 10:00–17:00
Dizzy kittens, wobbly cats and floppy felines
Kate Stain
Cranage Hall, Cheshire
Details from courses@bsava.com

LEARN@LUNCH WEBINAR FOR VNks
Wednesday 14 June
Time: 13:00–14:00
How to get the best out of your vet
Louise O’Dwyer
Details from webinars@bsava.com

EXCLUSIVE FOR MEMBERS

Extra £5 discount on all BSAVA publications for members attending any BSAVA CPD event.
All dates were correct at time of going to print; however, we suggest that you contact the organizers for confirmation.

NORTH EAST
Reg: 09:00, Meeting: 09:30–17:30
Practical abdominal ultrasound
Francisco Liabras Diaz
Clinical Skills Lab, QVSH, University of Cambridge
Details from eastanglia.region@bsava.com

SCOTTISH
Sunday 25 June
Reg: 09:30, Meeting: 10:00–16:00
Ophthalmology: what you really need to know
John Mould
The Westwood Hotel, Nr Glasgow
Details from scottish.region@bsava.com

WEST MIDLANDS
Thursday 29 June
Reg: 19:30, Meeting: 20:00–21:30
BOAS surgical management: treat in-house or refer and when?
Jill Maddison
Engineers House, Bristol
Details from southwest.region@bsava.com

July

NORTH WEST REGION
3 modules can be booked separately or 3 for 2!
Saturday 1 July–Sunday 2 July
Reg: 08:30, Meeting: 09:00–18:00 Saturday
Reg: 08:30, Meeting: 09:00–13:00 Sunday
Emergency and critical care weekend course
Sophie Adamantos and Matt Gurney
Marriott Hotel, Manchester Airport
Details from northwest.region@bsava.com

EAST MIDLANDS
Tuesday 4 July
Reg: 09:30, Meeting: 09:30–17:30
Mental health awareness training
Joint meeting with The Mind Matters Initiative
Trevor Bell
Breadsall Priory Hotel, Derby
Details from eastmidlands.region@bsava.com

SOUTHERN
Reg: 09:00, Meeting: 09:30–17:30
Mental health awareness training
Joint meeting with The Mind Matters Initiative
Trevor Bell
Holiday Inn Gatwick, Surrey
Details from southeast.region@bsava.com

Details from webinars@bsava.com

July

NORTH WEST REGION
Reg: 09:30, Meeting: 09:30–17:30
Mental health awareness training
Joint meeting with The Mind Matters Initiative
Trevor Bell
Holiday Inn Gatwick, Surrey
Details from westmidlands.region@bsava.com

EAST ANGLIA
Thursday 22 June
Reg: 09:00, Meeting: 09:30–17:30
Practical abdominal ultrasound
Francisco Liabras Diaz
Clinical Skills Lab, QVSH, University of Cambridge
Details from eastanglia.region@bsava.com

SCOTTISH
Sunday 25 June
Reg: 09:30, Meeting: 10:00–16:00
Ophthalmology: what you really need to know
John Mould
The Westwood Hotel, Nr Glasgow
Details from scottish.region@bsava.com

WEST MIDLANDS
Thursday 29 June
Reg: 19:30, Meeting: 20:00–21:30
BOAS surgical management: treat in-house or refer and when?
Jill Maddison
Engineers House, Bristol
Details from southwest.region@bsava.com

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Phaeochromocytoma

This month, Isabelle Desmas-Bazelle of Davies Veterinary Specialists presents notes on canine phaeochromocytoma

What is a phaeochromocytoma?
- Phaeochromocytoma is a rare neuroendocrine tumour derived from chromaffin cells in the adrenal medulla
- Phaeochromocytomas secrete excessive amounts of catecholamines (adrenaline and noradrenaline)
- It is a tumour of the older dog
- Phaeochromocytomas generally behave as slow-growing solitary masses and don’t have a high tendency to spread, although a metastatic spread of up to 40% is reported in the veterinary literature. The pulmonary metastatic rate is around 10%
- Invasion of adjacent vasculature (phrenicoabdominal vein and caudal vena cava) is reported in up to 85% dogs
- No sexual or breed predisposition has been described.

What are the clinical signs?
Clinical signs are vague and intermittent. They are due to excessive release of catecholamines and subsequent hyperstimulation of adrenergic receptors as well as to local infiltration of the tumour in the adjacent tissues and vessels. The following signs may be reported:
- Collapse
- Fatigue
- Hypertension and subsequent organ damage (epistaxis, acute blindness secondary to retinal detachment, acute kidney injury)
- Cardiac dysrhythmia
- Tachypnoea
- Polydipsia and polyuria
- Anorexia and weight loss
- Ascites secondary to venous thrombus
- Vomiting, diarrhoea.

How to diagnose Phaeochromocytomas?
Phaeochromocytomas are often incidental findings. The diagnosis should be a step-by-step approach:
- Baseline blood tests and urinalysis to search for concurrent comorbidities and as a pre-anaesthetic requirement. Urine specific gravity may reflect PU/PD. Blood tests may also help evaluate concurrent hyperadrenocorticism
- Eye fundus examination to look for retinal bleeding
- Non-invasive blood pressure
- Abdominal ultrasound or a CT scan should be performed to look at the degree of local infiltration. CT has been reported to help the detection of vascular invasion with a sensitivity of 92% and a specificity of 89–100%
- Baseline blood tests and urinalysis to search for concurrent comorbidities, pre-treatment with phenoxybenzamine.
- Positive prognostic factors are as follows: complete surgical resection, small size (<3 cm), no or limited invasion into adjacent organs, no other comorbidities, pre-treatment with phenoxybenzamine.

What is the prognosis?
- Mortality rate has been reported to be around 6–13% when the surgery is not precluded. Vascular dissection is necessary for removal of the intact tumour thrombus alongside the neoplastic gland.
- Surgery may be curative if complete resection is achieved and in the absence of metastatic disease.
- Positive prognostic factors are as follows: complete surgical resection, small size (<3 cm), no or limited invasion into adjacent organs, no other comorbidities, pre-treatment with phenoxybenzamine.

How to treat?
- Medically: The goal of medical treatment is to restore a normal blood pressure. Phenoxybenzamine (alpha adrenergic antagonist) is the treatment of choice. The dosage is 0.2–1.5 mg/kg q12h.
- Propranolol (beta blocker, 0.15–1 mg/kg q8h) can be used to manage tachycardia and arrhythmia but it should never be used without phenoxybenzamine in phaeochromocytomas cases.
- Radiation therapy and/or chemotherapy have not yet been reported to be effective in dogs.

Surgically:
- Adrenalectomy is the treatment of choice.
- Pre-treatment with phenoxybenzamine is mandatory for at least 2 weeks prior to surgery.
- Invasion into the adjacent vessels does not preclude surgical removal. Vascular dissection is necessary for removal of the intact tumour thrombus alongside the neoplastic gland.
- An intravenous alpha-adrenergic antagonist that has a rapid efficacy, such as phentolamine, can be used during anaesthesia in case of severe hypertension.

What is the prognosis?
- Mortality rate has been reported to be around 6–13% when the surgery is not an emergency procedure and/or dogs are pretreated with phenoxybenzamine.
- Surgery may be curative if complete resection is achieved and in the absence of metastatic disease.
- Positive prognostic factors are as follows: complete surgical resection, small size (<3 cm), no or limited invasion into adjacent organs, no other comorbidities, pre-treatment with phenoxybenzamine.
BSAVA Scottish Congress is delighted to return to the vibrant and dynamic city of Glasgow this Summer. Join us for three streams of first-class CPD, a 2-day small animal focused exhibition and a legendary Ceilidh.

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2-3 September 2017 SEC, Glasgow, UK
References and further reading from Companion April 2017

How To. (page 12–18)


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Clinical Conundrum (page 28–30)
