



WINTER 2018

# REFERRAL NEWS

## IN THIS EDITION:

Case Report:  
Spinal pain  
in a domestic  
short haired cat

Introduction to  
PAUL Procedure

MRI outpatient offer

Clinical work at  
Rosemary Lodge

## Bath Veterinary Referrals

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## Winter update from BVR...

As Christmas approaches and we look forward to the mince pie intoxications and turkey drumstick foreign bodies, we can also look forward to some new arrivals - both Samantha Lane, our soft tissue surgeon and Harriet Bice, our referral administrator are expecting in the New Year, and we will miss them both while they get to grips with all the challenges of new motherhood.

Heather Ridley will continue as co-referral administrator, and Harri's maternity position will be covered by one of our long standing receptionists, Vicky McGarva. Jon, Ted and Barbara will continue to see the usual wide range of soft tissue surgeries.

In other news, we have started to hit the road with a series of lunch and learns, and if you would like a visit from one or more of the referral team for a bit of free CPD and some sarnies, please get in touch.

Thank you all for your continued support, and a merry Christmas and Happy New year!

**Alex Gough**

Head of Referrals

## A multi-modal approach to spinal pain in a cat

**Anna Ellams** BVMS CertAVP MRCVS

### Case history:

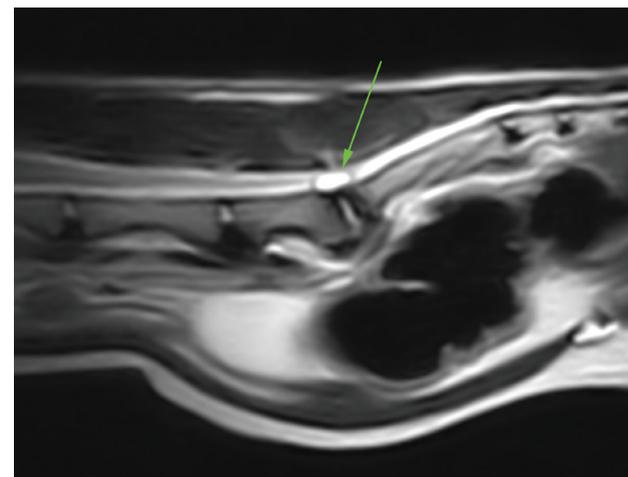
A 16-year-old female neutered DSH previously diagnosed with Hyperthyroidism and Chronic Kidney Disease (CKD) presented due to recent episodes of crying out when being picked up, abnormal (low) tail carriage, constipation, inappetence and lethargy.

In 2017, during investigations into a period of hypercalcaemia a whole-body CT had been performed which had revealed marked bridging spondylosis in her thoracic and lumbosacral spine. For this she was being treated with a low dose (7.5mg/kg i.e. 25mg BID PO) of gabapentin. Despite these interventions her owners were worried about her quality of life due to the painful episodes she was experiencing.

### Presenting signs and clinical findings:

Her hyperthyroidism was stable on thiamazole 0.45mg/kg BID PO (Thyronorm 5mg/ml solution ® Norbrook) and her CKD was being managed with a renal diet.

Temperature, pulse and respirations were normal though the patient was subdued on initial examination and reluctant to stand. Thoracic auscultation and abdominal palpation revealed no abnormalities other than disparity in renal size (one shrunken kidney which had been found on the CT in 2017) and constipation.



MRI image showing spinal cyst

There was obvious sensitivity to gentle spinal palpation with an exaggerated panniculus response and flinching on pressure on the lumbosacral area which was somewhat lateralised to the right side. Manipulation of the right hind limb also elicited muscle fasciculations of this leg.

Tail carriage was low though not flaccid with no voluntary tail movement evident.

Bloods and urine (by cystocentesis) were rechecked and her co-morbidities were found to

Continued over...

## A multi-modal approach to spinal pain in a cat continued...

be stable and well managed with her current medication and renal diet; no other diseases were found.

The patient was admitted for analgesia and supportive treatment (intravenous fluids and lactulose @ 2mls BID PO; thiamazole and renal diet were continued).

### Initial treatments:

A first pain score using the Composite Modified Pain Score (CMPS – feline) system for cats was performed resulting in a score of five out of 20.

Initial efforts to improve the patient's analgesia included an increase in gabapentin frequency to three times daily dosing (25mg TID PO) whilst amantadine syrup was introduced as an adjunct.

Whilst awaiting the effects of the above oral medications, a fentanyl continuous rate infusion (CRI) was started at a moderate dose of 0.05µg/kg/minute as well as a course of acupuncture. It was not anticipated that the acupuncture would effect an immediate improvement but might assist in release of myofascial planes to assist the other more traditional therapies.

These treatments resulted in an improvement in demeanour, a return of appetite and a resolution of the muscle fasciculations. Despite this her tail carriage remained abnormal and though she was happy whilst being examined in the kennel, she remained painful when lifted up and during palpation of her left lumbosacral area. After 24hrs of little further improvement, ketamine was also added to the CRI (amantadine had yet to arrive) but this had little additional beneficial effect at a dose of 5µg/kg/minute.

### Diagnostic tests:

After an excess of seventy-two hours of strong analgesic therapies resulting in insufficient beneficial effect, it was decided to perform advanced imaging to determine whether other abnormalities (than the spondylosis previously found in 2017) were causing the patient's symptoms.

CT was first performed but did not show any marked changes when compared to that done in 2017. Imaging then progressed to spinal Magnetic Resonance (MR) with T1 and T2 weighting. This revealed two potential sources of pain.

There was a focal ovoid non-mineralised lesion in the vertebral canal at L7-S1. This was described as having well-defined margins therefore a cyst (e.g. perineural or Tarlov cyst) was considered but neoplasia could not be ruled out. Also thickening of the right L7 nerve root i.e. neuritis (e.g. secondary to a chronic stenosis/ compression caused by the spondylosis) or less likely neoplasia was present.

### Treatment:

Options for treatment at this point were discussed with the owner including removal of the possible cyst, drainage of said cyst with epidural administration of steroid for short to medium term relief or euthanasia. The owner decided to try the cyst drainage and steroid injection in the first instance and hence this was performed by our orthopaedic surgeon Jon Shippam with 1mg/kg methylprednisolone (Depo-medrone V 40mg/ml suspension ® Zoetis).

Within 24 hours the patient's pain was significantly reduced though she still showed abnormal tail carriage. These improvements were maintained despite cessation of previous intravenous analgesics (fentanyl & ketamine CRI). She was discharged at this point on 7.5mg/kg Gabapentin TID as well as amantadine syrup @ 5mg/kg SID PO.

Fluid analysis of that drained revealed an increased protein level but no signs of neoplasia.

### Follow-up:

The patient is currently stable with no outcries of pain and normal ambulation of her hindlimbs as well as improved

tail position and movement. She remains on her low doses of gabapentin and amantadine currently and has regular pain reassessments during which we are trying to gradually reduce her medications.

### Discussion:

Several validated tools are now available which encompass pain scoring in our feline patients thereby allowing reassessment and adjustment of therapies to suit the individual's needs.

The Composite Modified Pain Score (see below) is a well-established validated tool best used in the acute or short-term hospital setting. It uses observation of behaviour including facial expression (muzzle and eye positions) as well as response to interactions such as stroking and palpation of potentially painful areas to generate an overall score for a patient's pain (e.g. 5 / 20). A tipping-point is suggested (four out of twenty) above which increased analgesia should be provided and under which a de-escalation of analgesia can be attempted. A score of 4 / 20 suggests the current analgesia regimen should be maintained and need not be altered. Regular reassessment can be set at any time interval determined by the dosing frequency of the medications used as well as the state of the patient. For example, we reassess our patients on analgesic CRI's every four to six hours whereas those receiving daily non-steroidal anti-inflammatories might be reassessed once or twice daily.

There exists an excellent tool for calculation of analgesic CRI's at the website [www.vasg.org](http://www.vasg.org) which dramatically simplifies the implementation of these medications.

Until recently there have been few if any validated pain scoring tools for use in chronic painful states particularly in the cat. However, within the past 6 months a new veterinary Health-Related Quality of Life tool (HRQL) has been released by NewMetrica, one for dogs and another for cats ([www.newmetrica.com/vetmetrica-hrql/](http://www.newmetrica.com/vetmetrica-hrql/)).

These tools use an on-line questionnaire for owners to answer at home at prompted intervals the results of which are then emailed back to the patient's owner and vet. The questions interrogate the patient's activity and mobility but also descriptors such as ability to relax or willingness to groom. This information is used to generate scores for the following parameters: happy and content; energetic and enthusiastic; active and comfortable; calm and relaxed. If below a threshold level, the owner will be prompted to arrange a veterinary assessment and an intervention (for example analgesic medication or a course of physiotherapy) can be instituted or amended. An individual patient can be tracked longitudinally to monitor their response to said intervention but this tool can also be used as a single assessment to aid owners when considering euthanasia on the grounds of prolonged poor quality of life.

### Conclusion:

In conclusion, a multi-modal approach to pain should incorporate implementation of life-style changes such as weight management and structured exercise programs in our canine friends, or in elderly cats, discussions of how they may benefit from litter trays with lower edges or require assistance to reach their preferred resting places.

The pharmaco-therapeutics available for our patients should be provided ideally under the guidance of diagnostics such as careful physical examinations, blood results and advanced imaging (CT and MR).

In chronic pain states acupuncture and other myofascial pain release therapies as well as laser have been shown to be of benefit and enable reduction of a patient's drug burden

especially helpful in those with multiple co-morbidities. Bath Vet Group employs a veterinary physiotherapist as well as multiple practitioners of acupuncture. A program of Pain Clinics where the focus of the consultation

is assessment and management of the patient's pain is currently being instituted and is organised through the Bath Vet Referral receptionists.

# Elbow dysplasia and the PAUL procedure

Jon Shippam BVSc CertSAS MRCVS

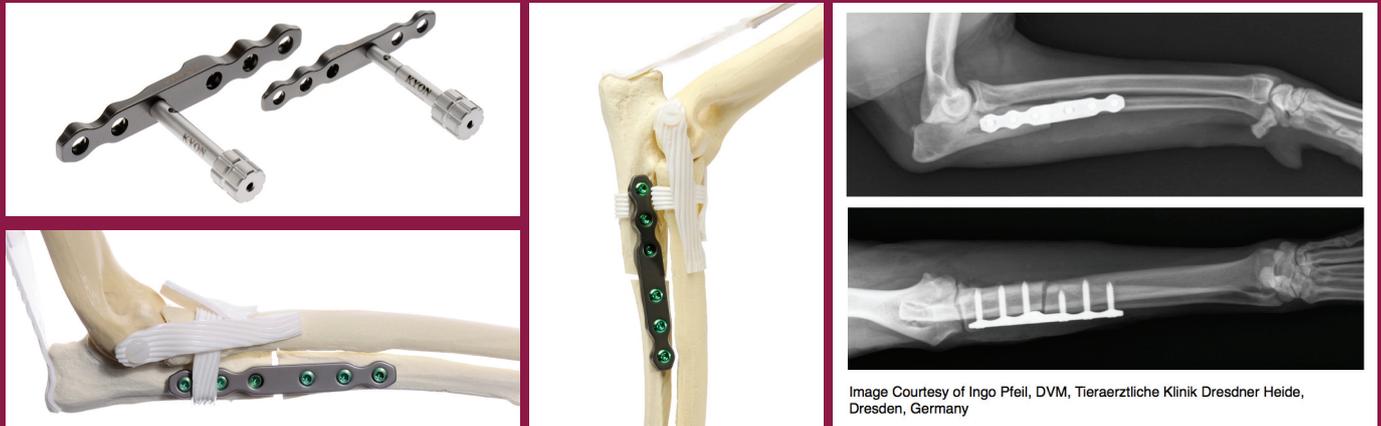


Image Courtesy of Ingo Pfeil, DVM, Tierärztliche Klinik Dresdner Heide, Dresden, Germany

**Elbow dysplasia is a general term describing a range of conditions that occur during growth, sometimes referred to as developmental elbow disease. These conditions include osteochondrosis dissecans of the humeral trochlea, ununited anconeal process, elbow incongruity and medial coronoid disease. Despite a large amount of research into these conditions many unanswered questions remain. However, evidence indicates that some aspects involve mechanical overloading of parts of the joint. For example, there is an association between a short ulna (relative to the radius) leading to overload of the anconeal process resulting in an ununited anconeal process. Medial coronoid fragmentation or fissuring appears to be caused by fatigue microdamage as a consequence of excessive loading.**

Medial coronoid disease is the most common developmental elbow disease, particularly affecting young Labrador Retrievers. Signs are often seen from six months of age presenting as a forelimb lameness although some bilateral cases may go unnoticed by owners. Diagnosis is aided by clinical examination, demonstrating pain on extension or flexion of the elbow, and on external rotation of the radius and ulna whilst the elbow is flexed (to load the medial coronoid process). Radiography often is unable to show medial coronoid fragmentation, instead a diagnosis of elbow dysplasia is made after finding osteophytes typically on the anconeal process (best seen on a fully flexed medio-lateral radiograph) or proximal radius (best seen on an extended medio-lateral radiograph). Subtrochlear sclerosis of the ulna is also an indication. Definitive diagnosis is typically made using computed tomography (CT) which will show medial coronoid changes including fragmentation, fissuring, irregular shape and subchondral bone sclerosis. However, CT can miss mild cases where only articular cartilage is involved. Conversely arthroscopy will give a detailed assessment of articular cartilage, but can miss cases involving fissuring and sclerosis of subchondral bone.

Treatment options include conservative management such as weight and exercise moderation, non-steroidal anti-inflammatory drugs, physiotherapy and hydrotherapy. Surgical treatment has been largely focused on removal of coronoid fragments by arthrotomy or arthroscopy, or more

recently subtotal coronoidectomy in cases of fissuring. However some cases fail to respond to conservative management and arthroscopic treatment. In addition, those cases that do respond will still develop progressive degenerative joint disease with many cases leading to medial compartment disease. Medial compartment disease is considered to be the end-stage progression where full thickness cartilage erosion develops with chronic pain and reduced function.

The proximal abducting ulnar osteotomy, or PAUL procedure, was designed to reduce the load on the medial compartment of the elbow. It achieves this in two ways. The first is by shifting the mechanical axis laterally to reduce the mechanical axis deviation (MAD). The mechanical axis is a line drawn from the shoulder to the foot when looking in the frontal plane, and the MAD is the distance from the centre of the joint to this line. When the line is medial to the elbow the medial compartment will be in more compression when compared to the lateral compartment. The PAUL procedure uses a concept similar to the high tibial osteotomy in humans which moves the mechanical axis laterally to reduce the MAD and unload the medial compartment. Studies have confirmed that the PAUL procedure both causes a lateral shift to the mechanical axis, and that it does actually reduce the load on the medial compartment. The procedure also tilts the proximal ulna to reduce load on the medial coronoid process. The PAUL procedure involves making a transverse osteotomy to the proximal ulna and applying a custom locking plate that leads to the distal limb being abducted (see images). The average time to bone healing is around 3-4 months, and lameness is expected to have resolved or be significantly improved after 4-5 months. Older dogs, and dogs with more severe medial compartment disease are expected to recover less well than younger dogs. Dogs over six years old, or with severe osteoarthritis are unlikely to be suitable candidates. Reported complication rates are considered to be low, with plate removal being required in around 5% of cases.

**At Bath Veterinary Referrals we are able to offer investigation and treatment of elbow dysplasia using CT, arthroscopy and the PAUL procedure.**



## BRAIN MRI FOR £1000

We are currently performing brain MRI on an outpatient basis for a special offer of £1000. This covers all costs including general anaesthetic and specialist interpretation. However, a consultation is not included - this is intended to help clinicians manage their own cases while keeping costs as low as possible. Typically, a case will be admitted and discharged by one of our referral veterinary nurses, and the specialist radiologist report will be sent direct to your practice. However, not all cases are suitable, so please ring to discuss if you have a case you feel would benefit from this offer.

## Cases recently seen

Severe hypercalcaemia in an 11 year old Border Terrier caused by primary hyperparathyroidism; two cases of multiple cranial nerve deficits caused by extension of otitis media into the brain stem; pathological fracture with thoracic metastases seen on CT; concurrent seizures and DCM/atrial fibrillation in an elderly Golden Retriever; severe pancreatitis and diabetic ketoacidosis in a 17 year old male Burmese cat, and severe pancreatitis in his sister (both Alex's cats!).

## Why choose Bath Veterinary Referrals?

- We pride ourselves on giving you the highest level of service
- We strive to enhance your reputation, looking after your clients and their pets in a way you would be proud of
- We offer a caring, friendly and personalised service. We keep clients and referring vets informed at all times
- We have a superb team of night nurses and night vets, a flagship hospital and the very latest equipment

## Our clinicians

**Alex Gough** MA VetMB CertSAM CertVC PGCert (Neuroimaging) MRCVS - Head of Referrals

**Jon Shippam** BVSc CertSAS MRCVS - Orthopaedic Surgeon

**Jenny Lambert** BVM&S CertVOphthal MRCVS - Ophthalmology

**Lisa Gardbaum** BVetMed CertSAM MRCVS - Internal Medicine

**Samantha Lane** BVSc BSAVAPGCertSAS MRCVS - Soft Tissue Surgeon

**Federica Manna** DVM CertAVP MRCVS - Assistant to Internal Medicine

**Edward Corfield** BVSc CertAVP MRCVS - Assistant Referral Surgeon

**Barbara Karolczak** MSc CertSAS MRCVS - Soft Tissue Surgeon

**Anna Ellams** BVMS CertAVP MRCVS - Internal Medicine



## Organising a referral is simple

To make a non-urgent referral please email [contact@bathvetreferrals.co.uk](mailto:contact@bathvetreferrals.co.uk) or call the team on **01225 832 521, option 3**.

To make an urgent referral please call one of our Referral Administrators who will be happy to take down the case details and speak with the team regarding an appointment. Where possible we will see emergency cases on the same day they are referred to us. Tel: **01225 832 521, option 3**.

To request advice on a case from one of our clinicians, please email or call the team using the details above.

Once you have contacted us, with your permission we will speak with the client directly to book a convenient appointment.

We ask that you forward any client history to us as soon as possible using the email address above.

## Free Radiograph Reading

To receive a free radiograph interpretation please email your images to [contact@bathvetreferrals.co.uk](mailto:contact@bathvetreferrals.co.uk).

One of our experienced clinicians will email in response at their earliest convenience.

