



**Bath Vet**  
REFERRALS

**Keeping you  
updated**

Spring 2024



Welcome to our spring newsletter. In this issue, we share a case of hypervitaminosis D, acute necrotising pancreatitis in a cat, a rectal mass in an 8-year-old MN Labradoodle and finally, news on our highly anticipated Congress.

### Lucy Mills - ACPAT Physiotherapist

We would like to welcome our new ACPAT physiotherapist, Lucy Mills, who joined us at the beginning of February. Incorporating our water treadmill into tailored physiotherapy programmes for patients is incredibly beneficial – this includes our post-operative orthopaedic patients too.



### Bath Vet Referrals Congress Tuesday 2nd July 2024

We are excited to announce that our Bath Vet Referrals Congress 2024 is returning for another year. Held at the luxury Macdonald Bath Spa Hotel on Tuesday 2nd July 2024, our referral clinicians along with guest speakers will present on a range of topics. Our referral nursing team are offering a comprehensive nurse stream that will include a variety of short presentations and interactive practical sessions.

**£90 for vets** and **£60 for nurses**.

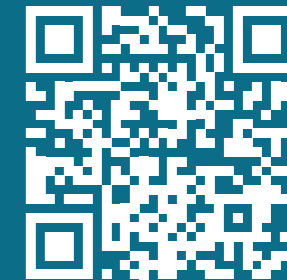
Early registration is advised, tickets are limited.



### Our package prices

Our package prices are proving popular with clients, and we have expanded our range of investigations and procedures that we offer packages for. We have also revised our existing packages to ensure they are as affordable as possible while maintaining the high quality of service that our clients expect.

[Scan to view our prices](#)



### Sign-up for email updates

To receive the latest news and updates from Bath Vet Referrals, sign up to receive our email updates which include news on recent cases, updates to our services as well as future CPD opportunities.

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# A case of hypervitaminosis D

**A 2-year and 4-month old FN long haired cat presented with a 3–4 month history of vomiting, diarrhoea, weight loss, inappropriate urination and tenesmus.**

She was started on a hypoallergenic diet one-month prior to presentation and her gastrointestinal signs improved. However, there was a significant weight loss despite having a good appetite. Inappropriate urination at home was also reported a few times. She has also been grooming less and her fur appeared not as healthy as before. Exposure to plant or other toxins was not reported. Vaccination, worm and flea treatment were up to date. There was no history of travel abroad. She was an indoor cat and the only pet at home. She has been fed a commercial diet.

On presentation she was bright. Her mucous membranes were pink. She had a suboptimal body condition. Heart rate was normal, abdominal palpation did not elicit pain. Body temperature was normal. External haematology showed mild nonregenerative anaemia of chronic disease at 27.5% (27.0–50.0). Macro-platelets were detected and platelet count appeared slightly reduced. Manual platelet estimate = minimum 90. Clots were not detected. Biochemistry serum showed raised total calcium at 3.1 mmol/l (2.0–3.0). In house gas analysis showed raised ionised calcium at 1.70 mmol/l (1.12–1.4).



## Common clinical signs associated with hypercalcemia in cats

- Polyuria and polydipsia
- Vomiting
- Constipation
- Lethargy, weakness
- Muscle twitching
- Cardiac arrhythmias

## Differential diagnosis of hypercalcemia in cats

- Idiopathic
- Primary hyperparathyroidism
- Hypoadrenocorticism
- Hypervitaminosis D
- Granulomatous disease
- Malignancy
- Chronic kidney disease

Urinalysis showed concentrated urine at  $>1.050$ , with no evidence of crystals. Urine culture was negative. Feline immunodeficiency and leukaemia virus tests were both negative making both diseases unlikely. Folate and cobalamin levels were both elevated which may reflect dysbiosis.

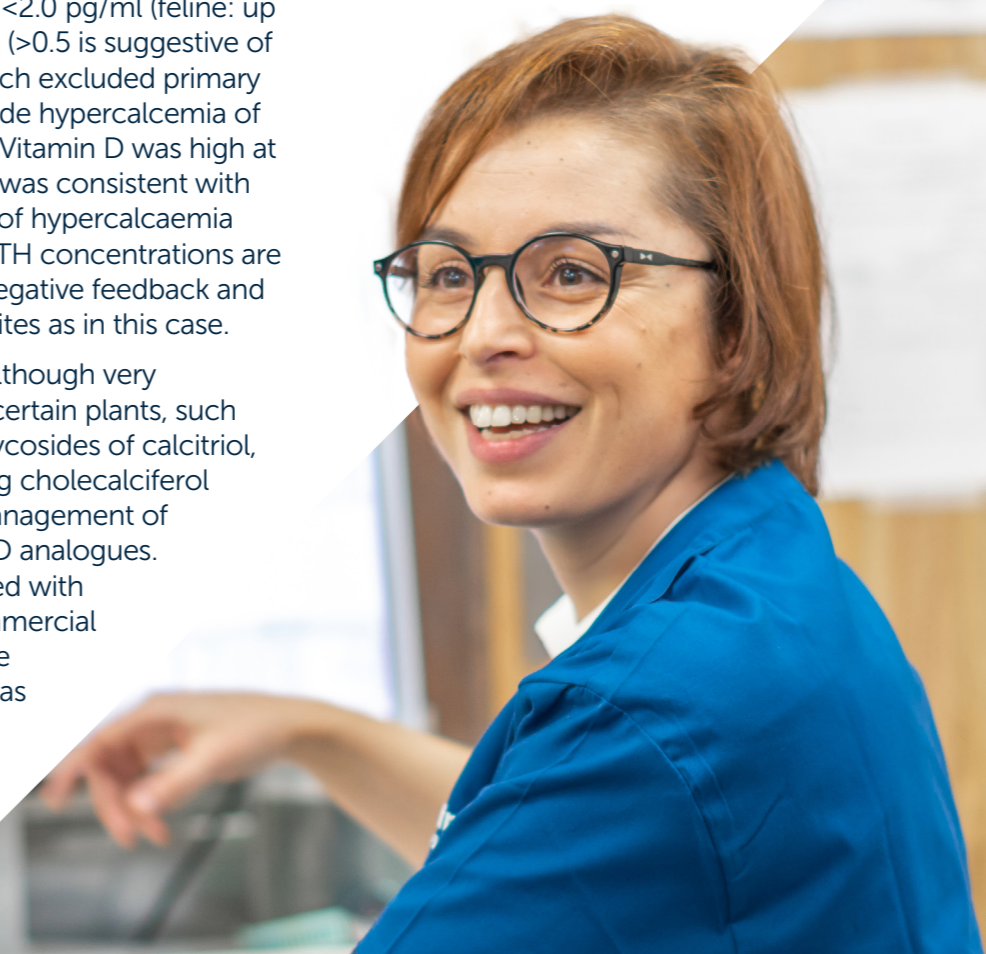
SDMA level was normal however close to the high range at 14  $\mu\text{g/dl}$  (0–14). Radiographs of the thorax and abdomen showed no obvious abnormalities. Abdominal ultrasound was unremarkable apart from the presence of a few reactive lymph nodes secondary to the underlying gastrointestinal signs reported.

PTH and PTHrp were evaluated to further investigate the hypercalcemia and were  $<2.0$   $\text{pg/ml}$  (feline: up to 40  $\text{pg/ml}$ ) and  $<0.1$   $\text{pmol/l}$  ( $>0.5$  is suggestive of malignancy) respectively which excluded primary hyperparathyroidism and made hypercalcemia of malignancy unlikely. 25-OH-Vitamin D was high at 767  $\text{nmol/l}$  (198–451) which was consistent with hypervitaminosis D. In cases of hypercalcaemia due to hypervitaminosis D, PTH concentrations are expected to be low due to negative feedback and increased vitamin D metabolites as in this case.

Toxic sources of vitamin D, although very uncommon in cats, include certain plants, such as jessamine, that contain glycosides of calcitriol, some rodenticides containing cholecalciferol and topical ointments for management of psoriasis containing vitamin D analogues. Hypervitaminosis D associated with ingestion of a complete commercial cat food containing excessive amounts of cholecalciferol has been previously reported.

As there was not a history of exposure to plants, rodenticides or psoriasis cream, hypervitaminosis D was likely secondary to commercial diet with excessive vitamin D concentration.

The patient was started on Royal Canin Fibre Response diet containing psyllium. Chia seeds were advised at 2 $\text{gr/cat}$  daily. On repeat examination one month later, she has gained weight and ionized calcium was within a normal range at 1.36  $\text{mmol/l}$  (1.12–1.4). Inappropriate urination was not observed and she was no longer straining.



# Acute necrotising pancreatitis in a cat

A 9-year-old male neutered Burmese cat was referred for inappetence, lethargy, weakness and pyrexia (39.8 °C). Previous blood tests had shown a mild hyperbilirubinaemia of 23µmol/l (0–15), a hyperglycaemia of 18mmol/l, a mild ionized hypocalcaemia of 1.12mmol/l (1.14–1.32) and the presence of abdominal fluid on ultrasound scan. He had been started on intravenous fluids, buprenorphine and amoxicillin-clavulanate.

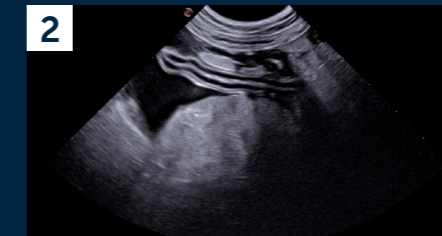
On clinical examination he was subdued and had abdominal distension, icteric third eyelids and yellow discoloration of his fur, presumably from staining from the bilirubin in his urine. His temperature was normal at 38.5°C and he was normotensive. Repeat blood tests showed a normal ionized calcium of 1.25mmol/l, a raised bilirubin level of 58µmol/l (0–15), a raised blood glucose of 17.9mmol/l, a low PCV of 22.8%, a moderate thrombocytopenia and a mild hypokalaemia of 3.3mmol/l (3.5–5.8).

Feline pancreatic lipase was very high at 14.6µg/l (0.1–4.4) and B12 was 464ng/l (270–1000) which was considered low normal despite being within the reference range, as levels of B12 should ideally be >400ng/l. Folate was low at 6.2µg/l (9.5–20.2). Urinalysis showed the presence of glucosuria and bilirubinuria.

On presentation he had a distended abdomen and appeared icteric.

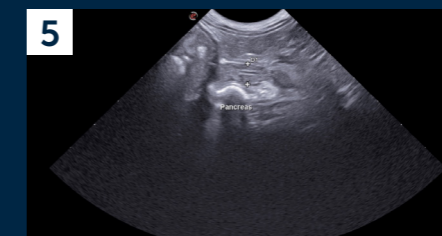
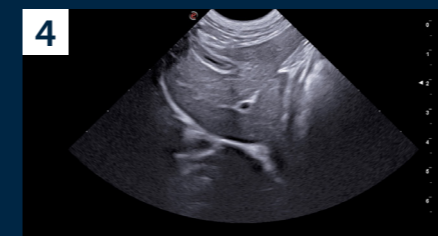
An abdominal ultrasound scan showed the presence of a large amount of abdominal fluid, an enlarged heterogenous and oedematous left limb of the pancreas and a generalised increased echogenicity of the mesentery. The abdominal fluid was analysed and found to be a high protein transudate with a low cellularity. PCR for coronavirus was negative.

- 1 Large, oedematous, heterogenous pancreas
- 2 Free abdominal fluid
- 3 Hyperechoic mesentery



He was treated with intravenous fluids and constant rate infusions of fentanyl, potassium chloride and metoclopramide; additional treatment included intravenous amoxicillin-clavulanate, marbofloxacin and maropitant for four days. A naso-oesophageal feeding tube was placed as he remained inappetent. Two days after admission he clinically deteriorated, his bilirubin was still raised at 54µmol/l (0–15) although his blood glucose had reduced to 11.2 mmol/l. A further two days later he was much brighter and was eating. Repeat blood testing showed a normal blood glucose, bilirubin and ionized calcium, a mild thrombocytopenia and ongoing anaemia with a haematocrit of 22.8%. Repeat abdominal ultrasound scan showed a normal looking pancreas, no abdominal fluid and a mildly hyperechoic mesentery.

He was discharged on amoxicillin-clavulanate, marbofloxacin, maropitant, B12 and folate capsules (Cobalplex, Protexin) and oral buprenorphine. He was transitioned to a hydrolysed protein diet exclusively for suspected underlying inflammatory bowel disease. A further week later at a recheck he was doing well and had a good appetite. Repeat blood tests showed a normal bilirubin and glucose level but ALT was elevated for the first time at 366u/l (12–130). Haematology showed a normal PCV of 35% and a normal platelet number. A repeat abdominal ultrasound scan showed the presence of a small thickened gall bladder with sludge present in the lumen. The pancreas and mesentery looked unremarkable and there was no abdominal fluid present.



- 4 Small thickened gall
- 5 Normal pancreas

He was continued on amoxicillin-clavulanate and marbofloxacin for a further two weeks and started on ursodeoxycholic acid for suspected cholecystitis. On repeat examination two weeks later, he was clinically normal, ALT had returned to normal with bilirubin and the other liver parameters still being in the normal reference ranges. Repeat abdominal ultrasound examination showed a normal gall bladder and pancreas. The antibiotics were stopped and a further three weeks of ursodeoxycholic acid were given.

Acute necrotising pancreatitis was suspected based on the ultrasound findings (enlarged, oedematous and heterogenous pancreas, hyperechoic mesentery and abdominal fluid), raised feline pancreatic lipase, hyperglycaemia and initial ionized hypocalcaemia. It is possible that there was underlying inflammatory bowel disease causing ascending infection into the pancreas and that the subsequent development of cholecystitis could have occurred due to previous biliary obstruction from the previous pancreatitis causing biliary stasis.

The initial thrombocytopenia was most likely immune mediated secondary to the pancreatitis and it resolved once he recovered from the pancreatitis.

Acute pancreatitis in cats can present with ascites and hypocalcaemia and it is thought that hypocalcaemia possibly suggests a poorer prognosis. Acute pancreatitis is classified histologically as acute necrotising or suppurative pancreatitis. With the former, hyperglycaemia has been reported to be more common whereas with suppurative pancreatitis, hypoglycaemia has been reported to be more commonly seen (Hill R. C and Van Winkle T.J: J Vet Intern Med 7 (1):25–33, 1993).

The glucose levels returned to normal on recovery from the acute pancreatitis but in some cases the hyperglycaemic can persist.

Although pancreatitis is generally thought to be a sterile process, ascending infection from the biliary system and intestines may be involved in acute pancreatitis in cats especially with the necrotising form. The localization and type of intrapancreatic bacteria found in infected pancreases suggest translocation of enteric bacteria as a likely source, so cover for intestinal aerobes and anaerobes is important such as potentiated amoxicillin. Marbofloxacin was added in this case due to good penetration into the pancreas in the presence of necrosis and initial lack of response to amoxicillin-clavulanate.

## Three messages to take away from this:

- 1 Pancreatitis should be considered as a differential diagnosis in cats with abdominal effusion, especially in the presence of hypoglycaemia, hyperglycaemia or ionized hypocalcaemia.
- 2 Hyperglycaemia can be reversible once the pancreatitis resolves.
- 3 Ionized hypocalcaemia is not always associated with a poor prognosis.

# Rectal Mass in 8-year-old MN Labradoodle

**Bertie presented to Bath Vet Referrals for investigation of diarrhoea and haematochezia which had been present for over two years. He had been treated for presumed IBD and colitis with a hypoallergenic diet trial (Purina HA) which caused his faeces to become firm but fresh blood was still present and Bertie was still straining to pass faeces.**

Bertie was initially seen by one of our medicine clinicians, Federica Manna. Clinical examination was mostly unremarkable other than the presence of a rectal mass in the dorsal aspect of the rectum (Figure 1).



Figure 1: Ulcerated mass in rectum

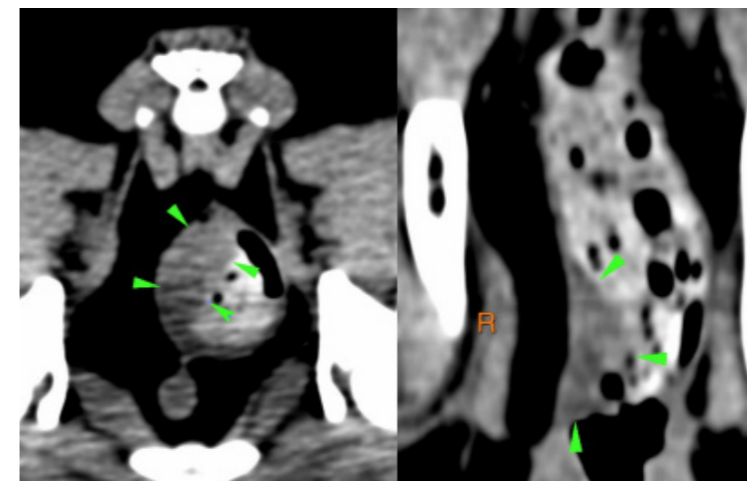


Figure 2: CT images of mass in dorsal rectal wall (green arrows)

External haematology was normal; biochemistry, folate and cobalamin were all within normal ranges. A CT scan of his chest and abdomen was performed which revealed an unremarkable thorax without evidence of pulmonary metastatic disease, a soft tissue mass measuring 3cm x 1cm x 2.7cm was present in the dorsal rectal wall (Figure 2 green arrows) and there was mild left colic lymphadenopathy which was likely reactive rather than metastatic.

**Continue reading on the next page...**

A sample of the mass was taken under general anaesthetic and sent externally for interpretation; this was consistent with an epithelial neoplasm.

Bertie was assessed by our Senior Referral Surgeon, Samantha Lane, who advised surgical resection of the mass under general anaesthetic. The mucosa of the rectum was everted through the anus and stay sutures were then placed to apply caudal traction and exteriorise the entire mass. A submucosal incision was performed with 1cm margins surrounding the mass. Once removed, the mucosal defect was sutured with absorbable suture material in a simple continuous pattern. Bertie was discharged from the hospital the same day with analgesia and a low residue diet. At his post-operative examinations, Bertie was doing well and was passing normal faeces but did have some tenesmus.

Histopathology was consistent with a rectal adenoma with cellular pleomorphism but there was no evidence of penetration of neoplastic cells through the basement membrane i.e., development of adenocarcinoma.

Rectal adenomatous polyps are uncommon, arise from the lining of the rectum and protrude into the rectal canal. They can vary in size and in 20% of cases multiple lesions can be present. Polyps occur with equal frequency to malignant tumours and over time, they can undergo neoplastic transformation into adenocarcinomas. Surgery to remove rectal masses is challenging due to the local anatomy and relative inaccessibility to the area.

Complications following surgery include haematochezia and tenesmus which usually resolve within seven days and surgical site dehiscence which would usually heal by second intention.

Dogs who have been diagnosed with a rectal polyp are at risk of developing more adenomatous polyps in the future; we have recommended that Bertie has regular rectal examinations (every 3–6 months) to detect any additional lesions developing.

At Bath Vet Referrals we have a multi disciplinary approach to cases and collaborate between departments to provide a high standard of care to our patients. Our experience, excellent facilities and extensive high quality CPD allow us to treat a wide range of soft tissue, orthopaedic and medical conditions.

We offer fixed prices and complication agreements for some of our procedures; please visit: [www.bathvetreferrals.co.uk/pricing](http://www.bathvetreferrals.co.uk/pricing) for more details.

# Outpatient abdominal ultrasound service

Lucy Andrews Hird MA VetMB CertAVP(VDI) MRCVS.  
Advanced Practitioner in Veterinary Diagnostic Imaging

We are now offering outpatient abdominal ultrasound scans on clinically stable patients on Fridays. These are ideal for referring vets who wish to continue management of their own cases. We have recently obtained a new, top of the range, ultrasound machine (Esaote MyLabX8), which is suitable for scanning all sizes of companion animal and allows us to obtain high resolution images.

Cases will be admitted and discharged by a referral nurse and do not include a consultation or advice from a referral vet beyond what is included in the imaging report. A full abdominal ultrasound is performed in every patient and a detailed report will be emailed to you within 24 hours of the patient being seen. Measurements will be included that can be used for comparison at a later date and images can be provided on request.

**Examples of cases that would be suitable for an outpatient abdominal ultrasound scan include:**

- Assessment of adrenal glands in dogs diagnosed with hyperadrenocorticism
- Assessment of the urinary system in animals diagnosed with renal disease
- Abdominal mass localisation in a clinically stable patient
- Reproductive tract disorders including prostate evaluation or location of retained testicles
- Assessment of abdominal wall hernias

If it is likely that you will need medical advice or further investigations following or during the ultrasound examination, then a full medical referral may be more appropriate. If you are not sure if a case would be suitable for an outpatient scan, we would be happy to advise.

Organising an outpatient referral is simple. Please fill in our outpatient form, email [contact@bathvetreferrals.co.uk](mailto:contact@bathvetreferrals.co.uk) or call the team on **01225 982777**.



# Bath Vet Referrals Congress 2024

Join us for our upcoming Congress,  
taking place on **Tuesday 2nd July 2024**,  
at the luxury **Macdonald Bath Spa Hotel**

With dedicated vet and nurse streams, a certification of completion, plus a 2-course hot and cold buffet lunch, it's an opportunity not to be missed. Vet lectures to include: **Perianal surgery, Canine elbow dysplasia, Feline TB, Cruciate surgery, Physiotherapy and more.**

The veterinary nurse stream will include short presentations and small group interactive sessions in the following topics: **ECG, Chemotherapy, CRI, Orthopaedics, Soft tissue, BOAS and ventilators, Crash scenarios, Physiotherapy and more.**

This is a chargeable event at **£90 for vets** and **£60 for nurses.**

To reserve your place,  
please scan the QR code:



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