

# King Edward Referrals News

This was supposed to be the April issue of our new newsletter, but then life (e.g. EC-SAVA, playing wedding photographer nr Warmbaths and the spay campaign in Missionvale) happened. As you've probably NOT been checking your in-box daily wondering what on earth happened to it, I'm sure it's not a crisis.

## Case Study no 2: A collapsed dog



**Signalment:** 10 yo MN Miniature Schnauzer  
**Presenting complaint:** Joint pain (esp hips and also RF) for some time. This had been getting worse recently and he was given 2.5 mg pred daily for the last 10 days. For the last few weeks - months he was less active and more clingy. Today, he was unable to get up and his abdomen appeared distended. Appetite appeared unchanged / slightly de-

**Clinical examination:** T 38.4, P 168, RR pant, wt 9.8 kg, bcs 5/5  
Colour pale side of normal. Tartar 3+ and halitosis. Gingival resorption but not much inflammation. In NAD. Thoracic auscultation NAD, abdominal palpation: solid. Rectal NAD. Orthopaedic examination: hair discoloured R carpus as licking ++ and lame RF 3/5 rapidly improving with exercise. Decreased ROM RF carpus more than L. Thickened toes RF. Definitely much better outside on grass and definitely better once on his feet - consistent with DJD. Nn exam: no deficits in myotactic reflexes or conscious proprioception, hopping. No R armpit pain

### Minimum database:

- Haematology: no significant changes
  - Biochem (K9 senior wellness): sample slightly lipaemic even after heparin. Changes consistent with steroid use (cholesterol, ALP)
- Urine analysis: SG 1.026, pH 6, protein 1+, sediment NAD (1+ debris)

**Question 1:** What's on your master problem list?

**Question 2:** What would you do next?

**Question 3:** How would you reach a diagnosis?

**Question 4:** Is there anything else you'd do before collecting biopsies?

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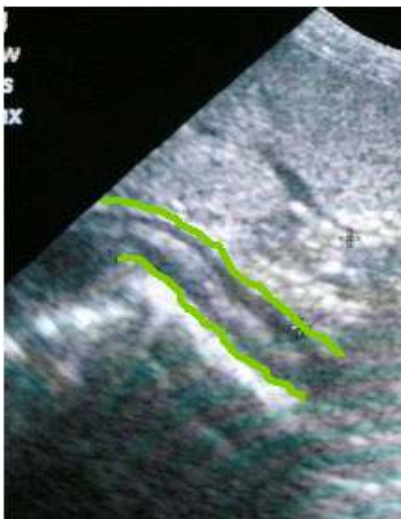
**Answer 1:** Even after an MDB there is very little to work with here. He is diffusely unwell with possible abdominal distension.

The multifocal DJD, obesity and dental disease are likely to be concurrent conditions rather than the primary problem. Lipaemia is likely to be breed associated. The concurrent problems need to be taken into account with management / treatment choices, but are unlikely to lead to a diagnosis. The collapse could be a consequence of his DJD alone. Pain from the DJD could be exacerbated by another source eg abdominal pain but there is no corroborating evidence at the moment. Urine is not perfectly concentrated but this could reasonably be a steroid side effect.

**Answer 2:** Abdominal radiography / ultrasound to investigate the abdominal distension. Ultrasound is a lot more sensitive than radiography.

Ultrasound abnormalities:

- liver: multiple small (2-4 mm) hypoechoic nodules in otherwise normal liver DD nodular hyperplasia, mets. Present on scan 6 months ago and have not changed.
  - stomach: focal area of gastric wall in fundus shows increased wall thickness (from 0.42 cm to 2.28 cm) with an irregular inner margin and complete loss of wall layering.
- Remainder of GIT of NAD.



Normal stomach wall



Blue: outline of spleen  
Green: stomach wall with more normal layering to the right and severe thickening with loss of layering to the left  
There is gas trapped under the thickened portion of the stomach resulting in dirty shadowing.  
Normal stomach wall



Blue: right limb of pancreas  
Green: duodenum. Often this is significantly thicker than the rest of the small intestine in dogs, which helps you find it. Follow it from the pylorus or find the thick, straight bit of SI in the right upper quadrant  
Pink: colon wall is usually < 2 mm thick (vs duodenum < 5.1 mm in dogs less than 20 kg)  
Blue: right limb of pancreas next to duodenum - a good land mark

The marked thickening and loss of layering in the stomach wall is consistent with focal inflammation or infiltration, with neoplasia more likely owing to the severity of the change

Answer 3: You have 3 options. They are not mutually exclusive

Ultrasound guided FNA	Endoscopic biopsies	Surgical biopsies
Quickest and cheapest	Less invasive, quicker post op recovery	Most invasive
May need sedation but GA rarely necessary	Can visually inspect whole stomach lining	Have to rely on palpation
Most sensitive for lymphoma and adenocarcinoma, less for spindle cells	Can rapidly biopsy many different areas	Sample sites limited by time
Non-diagnostic samples common and do not exclude a tumour	Sampling limited to mucosal lesions - may miss deeper tumours	Can biopsy any organ that looks or feels abnormal
	Cannot reach past the proximal jejunum in most dogs	Can sample anywhere along small intestine
	Procedure of choice if hypoalbuminaemic	Risk of wound dehiscence if albumin < 20 g/l
	Can collect directed samples from small lesions	If lesions are not palpable you're stuck
	cannot	Can potentially resect mass at the same time
	Can inspect oesophagus and r/o oesophagitis at the same time	cannot

Answer 4: Radiograph the lungs (better images once he is anaesthetised). If there is convincing evidence of pulmonary metastasis, some owners may not want to pursue further investigation.

It is unusual to perform upper GI endoscopy on animals that do NOT vomit / have diarrhoea. If either of those signs is present, a full faecal analysis including a Giardia screen should precede biopsies.

**Results**

endoscopy:

- oesophagus NAD
- Stomach: well margined mass - mildly erythematous, soft, with fine spiderweb over the convoluted surface. Remainder of stomach NAD but easy to biopsy incl around pylorus. Biopsies collected from normal stomach, adjacent to mass and mass itself. Mass easy to sample, billowy but did not bleed much after sample collection

**Histopathology:**

Prominent lymphoplasmacytic gastritis (LPG) and mucosal gland ectasia that is generalised ie not limited to the mass. Secondary gastric rugal hypertrophy. Prominent oedema in some sections probably explains the mass effect. These findings are consistent with lymphoplasmacytic gastritis.

## Diagnosis: suspected severe lymphoplasmacytic gastritis

**Comment:** LPG can progress to lymphoma or can represent the superficial change associated with a deeper lying lymphoma in the gastric wall. It bothered me that the patient had no obvious change in appetite and was not vomiting - changes I would typically associate with LPG. Surgical biopsies would be necessary to reliably differentiate the two. These were discussed with the owner but declined.

The dog responded well to steroid therapy (1 mg/kg bid). His owners have started tapering the dose (slowly, every 2-3 weeks).

Usually a dog with idiopathic gastritis would be placed onto a novel protein diet eg hill's z/d. In this case, we had to balance the urgent need to control his weight and his joint pain with the possible benefit that a novel protein feed would provide. We thus stuck with the hill's j/d reduced calorie diet.

## Change of date for next CPD talk in Port Elizabeth

We decided to move the next Port Elizabeth CPD talk from the 9<sup>th</sup> to the 8<sup>th</sup> June because the 9<sup>th</sup> is the start of the school holidays and we thought some of you would want to head off into the blue and distant yonder. I've also decided to change the topic to pancreatitic disease - canine and feline, acute and chronic. This is because Sharon Centre is doing a whole day on liver disease at the SAVA congress. She has been doing research on liver disease for ever and will be able to talk on stuff that hasn't even hit the literature yet. I can always update people that didn't make it to congress later in the year.

### Bayview Animal Clinic

has 50 Cyclohexal  
100mg capsules to sell

### Free Lasix syrup

One of our clients donated a recently opened bottle of **Lasix oral suspension** after her pet died last week. It's free to a needy home.

If you have a suitable case, call us at King Edward Referrals and arrange collection

### Mount Croix

has some Torbugesic paste that's looking for a new home - for dogs with severe coughing

## Antihistamines - which drug when?

### Histamine receptors:

H1 - in skin, smooth muscle and glands of airways and GIT

H2 - most important cause of HCL secretion in the stomach and peripheral vasodilation

### Histamine release

Allergies / anaphylaxis (mainly H1 but also H2 receptors - eg the tachycardia is H2 receptor mediated)

Mast cell tumours (see H1 and H2 mediated paraneoplastic effects)

Drugs: e.g. (opiates - most pronounced in morphine), Saffan (cremophor L carrier). Stimulation of H1 causes GI hypersecretion and hyperperistalsis.

### Indications for H1 blockers

**Allergies** - H1 blockers lower the dose of prednisone needed to control signs. Efficacy varies between drugs and between individuals. Try different ones for a week while keeping all other treatments the same. (Aterax v expensive!)

(Anaphylaxis - effect of H1 blockers too weak. Use adrenalin +/- rapid acting cortisol eg Solu-cortef)

Drug	Tablet size	Dog dose	Cat dose
Chlorpheniramine (Allergex, Rhineton)	4mg	2-12 mg total dose tid	2mg total dose bid
Clemastine (Tavegil)	1mg	< 10 kg: 0.5 mg bid 10-25 kg: 1 mg bid > 25 kg: 1.5 mg bid	0.1 mg/kg bid
Cyproheptadine (Periactin, Ciplactin)	4 mg, 30 mg	0.1-0.5 mg/kg bid-tid	0.1-0.5 mg/kg bid-tid
Hydroxyzine (Aterax)	25 mg, 100mg	2.2 mg/kg tid	2.2 mg/kg tid
Promethazine (Phenergan)	injectable	0.2-0.4 mg/kg i/v or i/m tid - qid	0.2-0.4 mg/kg i/v or i/m tid - qid

General side effects of H1 blockers: sedation, dry mouth, rarely paradoxical excitement

### Additional uses of specific H1 blockers:

**Motion sickness** / vomiting associated with vestibular disease. The following are particularly effective. Their effect appears at least partially independent of H1 inhibition - they also seem to work directly on vestibular nerves.

**Cyclizine** (Valoid): 4 mg/kg tid (both species) or 25-100mg total bid in dogs only. In people, cyclizine is used to treat post op nausea, particularly related to GA agents / opiates.

**Diphenhydramine** (not practical in SA because only available in combination flu remedies)

**Appetite stimulant** because of concurrent serotonin blocking effect - cyproheptadine: 0.1-0.5 mg/kg po 2-3x daily in dogs and cats

**Pre-med before chemotherapy:** H1 blockers are administered before doxorubicin treatment to decrease the chance of allergic reactions / anaphylaxis. H1 blockers are more effective when administered before the allergy/anaphylaxis is triggered.

## Indications for H2 blockers

**Gastric / oesophageal ulceration** - H2 blockers. Cimetidine effect weak and many drug interactions. Use ranitidine and consider adding omeprazole initially (esp with oesophagitis)

**GI prokinetic** - some of the H2 blockers (see below). Can use ranitidine to treat idiopathic megacolon in cats

Drug	Dose	Potency	Issues	Prokinetic effect
Cimetidine (eg tagamet)	5-10 mg/kg 3-4x daily	Original drug	- Decrease hepatic blood flow by 20% - Block P450 oxidases in the liver and affect metabolism of many other drugs - Absorption decreased by food - Protracted dosing at 10 mg/kg immunosuppressive - gynaecomastia, galactorrhoea	no
Ranitidine (eg Histak, Zantac)	2 mg/kg bid	5-10x that of cimetidine	Side effects rare, do not induce above. Hypotension and cardiac arrhythmias possible esp if used i/v	Yes - whole GIT
Famotidine	0.5 - 1 mg/kg 1-2x daily	More potent than ranitidine	- Poor oral absorption - No inhibition of P450s- not metabolised - Little experience with veterinary use	no
Nizatidine	1 mg/kg i/v bid 2.5 mg/kg po sid-bid	5-10x that of cimetidine	- completely absorbed p/o - no P450 inhib- not metabolized - little experience with veterinary use	Yes - only gastric effect though

The last 2 do not appear to be available in South Africa at this stage. Omeprazole (Losec) is significantly more effective at increasing gastric pH than H2 blockers.

## Amanda's hot tips

\*\*\*\*\*      \*\*\*\*\*      \*\*\*\*\*      **Update for Section 21 applications**      \*\*\*\*\*      \*\*\*\*\*      \*\*\*\*\*

We have recently found out that the payment of R200.00 needs to be paid with each application, therefore every time you re-order, you will need to pay again

## Drug Labels

To stay legal you need to show the following on your drug labels:

1. Name of medicine / active ingredient
2. Name of owner and patient
3. Directions for use
4. Name and address of veterinarian
5. Quantity dispensed
6. Date of issue
7. Expiry date of drugs
8. **Prescription reference number** \*\*\* new \*\*\*