

Sue Foster BVSc MVetClinStud FACVSc
Small Animal Medical Consultant
Vetnostics
60 Waterloo Rd, North Ryde NSW 2113
E. sfoster01@bigpond.com

Signalment: 'Bambi', ShihTzu/ Malt x 5.7 y.o. FN

History: Periods of stupor noticed by the owner over a week, 3-4 days increasing lethargy and inappetence, yellow pasty diarrhoea for 24 hours and possible polydipsia. The dog had had episodes of shaking and 'collapse' and would appear to 'fall asleep while standing'.

PE abnormalities: Vague and disorientated mentation with one mild short duration seizure during examination; vertical nystagmus, anisocoria, slight head tilt to the left, weak, ataxic, trembling/twitching slightly, decreased hindlimb reflexes, slightly decreased forelimb reflexes.

Diet:

- Woolworths Select Dog Food Chilled Beef And Vegetable Roll
- VIP Dog Food Chilled Roll Gourmet Chicken
- JerHigh Chicken Sampler Treats/jerky (Thailand)
- Pet mince from the local butcher (not known whether preservatives added)
- Supplemented with chicken breast fillet cooked and mixed with vegetables

Haematology: normal

Biochemistry: normal apart from slightly decreased potassium (3.2 mmol/L)

UA: 4+ glucose (blood glucose 8.7 mmol/L), USG 1.008

Urine cytology normal and no growth on bacterial culture. Fractional excretion of electrolytes normal.

Prescription: IV fluids with added KCl

Outcome after 36 hours: Bambi started eating small amounts. She improved slightly in demeanour and would try to wag her tail, but was not quite alert and occasionally appeared to have periods of stupor and trembling.

My suggested diagnosis: Likely acquired proximal renal tubulopathy to account for gastrointestinal signs, polydipsia and inappropriate glucosuria. Neurologic signs didn't really fit but the dog seemed to be responding to IV fluids so I ignored them (bad mistake...if using pattern recognition, then the pattern has to be right!).

Progress: Three days after admission, she started to deteriorate neurologically with circling to the left, falling to the left and, occasionally, falling to the right also. Over the next 24 hours this progressed to anorexia, depressed mentation, lateral recumbency, inability to stand and knuckling on all 4 limbs when held in standing. The owners had limited funds for further investigation so the veterinarian involved provided a great deal of the treatment for free and Vetnostics diagnostic laboratory provided free urine and serum electrolytes for the fractional excretion of electrolytes. Finally, I thought about the neuro signs and the diet: processed dog roll and pet mince both previously having been reported to result in thiamine deficiency in Australia due to added sulphites as preservatives. No thiamine injection was available but a large dose of B complex was given to provide 40 mg thiamine whilst the veterinarian sourced oral 100 mg thiamine tablets from the health shop/pharmacist.

Outcome: Glucosuria and neurological signs resolved, normal dog and delighted owners (lovely old couple). There was a rapid response to thiamine (some mild improvement noted within 4-5h) and steady improvement to near normal over 4 days (on 100 mg thiamine PO SID), when the dog was discharged.

FOLLOW UP SULPHITE ANALYSIS

VIP (the manufacturers of both dog rolls) responded rapidly to our enquiry and informed us that there were no sulphites in these products. Masterpet also responded promptly to our questions. Dr Joe Katsikaros however, paid to have both dog rolls, the JerHigh treats and the pet mince analysed for sulphite content. The culprit for the added sulphite was the mince from the butcher!

FOLLOW UP ACQUIRED PROXIMAL TUBULOPATHY

There is little doubt that one of the components of this dog's diet was responsible for the acquired renal tubulopathy (acquired Fanconi syndrome) as the pattern for this was similar to that in the cases reported by Thompson et al (2013). The tubulopathy and glucosuria reversed with withdrawal of these food sources and has not recurred. The case was logged with AVA PetFAST, a site for reporting potential adverse reactions to pet foods or treats.

MORALS OF THE STORY

1. That this dog had not 1 diet-related problem but 2 serves as a reminder to check and analyse the diet carefully always.

2. Do a careful problem oriented approach and don't dismiss the signs that don't fit as is often done, in my experience, with inappropriate glucosuria but in this case vice versa, with the inappropriate glucosuria detracting from the even more critical issue of thiamine deficiency!

FINAL NOTE

The owners of this dog, elderly and both recently out of hospital, are determined to pay back as they can, but there is no doubt that their dedicated and compassionate veterinarian, Dr Joe Katsikaros, saved this dog's life by the care she provided at her own cost. That she also went on to identify the cause of the thiamine deficiency has provided us with a reminder that not all food sourced from butchers is safe and that 'pet meat' cannot be regarded as being safe in dogs (or cats) regardless of its source.

This case was logged with PetFAST, as all suspected adverse food and treat reactions should be. The pet food companies involved were quick to respond to the case and help with investigations. As acquired tubulopathies are continuing to occur in Australia, we do request that any suspected cases are logged on PetFAST. I am always happy to take enquiries on the issue (as are Drs Linda Fleeman and Mary Thompson).

And this one last with the caption



A picture says a thousand words ' Why we choose to become vets'.

Reference

Thompson MF, Fleeman LM, Kessell AE, Steenhard LA, Foster SF. Acquired proximal renal tubulopathy in dogs exposed to a common dried chicken treat: retrospective study of 108 cases (2007-2009). *Aust Vet J* 2013;91:368-371