

Vetpath is a specialist veterinary laboratory dedicated to providing our clients with the finest laboratory diagnostic service. A team of veterinary pathologists and medical scientists with extensive experience in veterinary diagnostic pathology forms the core of the Vetpath team.

VN News

JULY 2019

Hypercalcaemia

Hypercalcaemia can be associated with a number of physiological and pathological conditions.

Non-pathological causes of hypercalcaemia include active bone growth in young animals, severe lipaemia and icterus causing interference with measurement, or hyperalbuminaemia.

Pathological hypercalcaemia can be due to primary hyperparathyroidism caused by a parathyroid adenoma. However, hypercalcaemia is more commonly associated with non-parathyroid gland disease. Causes include:

1. Malignancy e.g. lymphoma, carcinomas including anal sac adenocarcinomas and others.
2. Bone remodeling e.g. multiple myeloma, metastatic or primary bone neoplasia and osteomyelitis.

3. Renal failure – acute and chronic.
4. Granulomatous disease.
5. Hypervitaminosis D e.g. with rodenticide toxicity or dietary overdose.
6. Hypoadrenocorticism.
7. Idiopathic hypercalcaemia - most common in cats.

Serum total calcium is made up of three parts: ionised, complexed and protein-bound. If total calcium is increased, this does not necessarily mean that the ionised proportion of calcium (iCa) is increased, and iCa should be measured. iCa is best measured anaerobically – blood is collected into a serum tube that is filled to capacity, and tested within 2 hours of collection. Exposure to air increases the pH of serum, causing proteins to bind to calcium, and reducing the ionised fraction. The blood tube should therefore not be opened between collection and testing.

Parathyroid hormone (PTH) and parathyroid related protein (PTHrp) tests can be performed once other causes of

hypercalcaemia are ruled out. These tests are not currently available in Australia, and samples have to be sent to the USA. Sample requirements are strict. PTH is tested from serum, and PTHrp on EDTA plasma. Samples need to be collected from fasted animals (not lipaemic), spun down and separated within an hour of collection, and sent frozen to the laboratory. A separate (serum) sample is required for concurrent iCa measurement. Serum Vitamin D testing is also available, and can either be performed as part of a malignancy profile (USA), or as a stand-alone test.



References:

<https://www.dcpah.msu.edu>
<http://eclinpath.com>

New Product & Price List

The Product & Price List for 2019-2020 is now available.

The Product & Price List aims to provide concise, useful information about the tests available at Vetpath. More information can be found on the Vetpath website. The address is: www.vetpath.com.au

One notable change this year is the structure of cytology fees. Cytology has now been divided into two categories:

1. Routine External Cytology.
2. Internal Organ Cytology.

Routine external cytology includes cutaneous and subcutaneous masses, lymph nodes, nasal cytology and synovial fluid smears (without fluid). Up to 6 slides from a single site can be submitted. Additional lesions will be charged separately, however note that aspirates from multiple lymph nodes are charged as a single site (up to 6 slides in total). Internal organ cytology includes aspirates from intra-thoracic or intra-abdominal organs and masses.

Please contact the laboratory to speak with a pathologist if you have any questions regarding the new Product & Price List or are unsure how to charge for a submission.

Xylitol toxicity in dogs

Xylitol is an artificial sweetener produced from hardwood trees, corn cobs and other vegetable material. It is manufactured into a white powder that is marketed as a natural alternative to sugar.

Many products contain xylitol including sugar free chewing gum, toothpaste and oral hygiene products, peanut butter, fruit drinks and other sugar-free products. Some medicines including nasal spray, allergy medicines and prescription drugs may also contain xylitol.

The effect of xylitol differs dramatically between species. Ingestion causes a minimal increase in insulin release in humans, other primates, rats and horses. In dogs, cats, rabbits and goats, however, it causes a massive release of insulin, resulting in dangerously low blood sugar levels and associated toxicity (weakness, seizures, collapse and death). At higher doses it can cause massive liver necrosis.

Vomiting is usually the first signs, followed by hypoglycaemia 30 minutes to 12 hours after ingestion and an increase in liver enzymes within 12-24 hours.

References:

1. MSD veterinary manual
2. <http://www.pethealthnetwork.com/dog-health/dog-toxins-poisons/popular-xylitol-products-can-poison-your-dog>



Sample labelling

All samples submitted to Vetpath must be labelled with the patient's name. Clinics have to be contacted to confirm the patient's identify for all unlabelled samples. This NATA requirement interrupts work flow at the lab and your practice, and is an avoidable inconvenience.

Please label all samples!



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