

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

JUNE 2015

Serial analysis of Cardiac Troponin I

Cardiac Troponin I (cTnI) has been used in human and veterinary medicine as a marker of cardiac myocyte damage.

cTnI is specific to cardiac myocytes and is not elevated with skeletal muscle damage. Increases occur very soon after injury occurs (within 2 hours) and in acute injury, the degree of increase in activity correlates with the severity of the muscle damage.

Chronic cardiac injury generally causes more subtle changes in cTnI and serial monitoring of this parameter may provide more useful information for monitoring progression of the disease. A recent study published in *Veterinary Clinical Pathology* assessed the changes in serum cTnI over a 6 month

period in dogs with mitral valve disease (MVD).

Forty six dogs were evaluated for the study. The dogs were allocated into 3 groups based on severity of their clinical signs. There was a significant decrease in cTnI in the 2 weeks after the initial diagnosis of MVD. Persistently elevated cTnI levels were associated with slowly worsening clinical status and likely reflect ongoing myocardial injury due to chronic haemodynamic abnormalities.

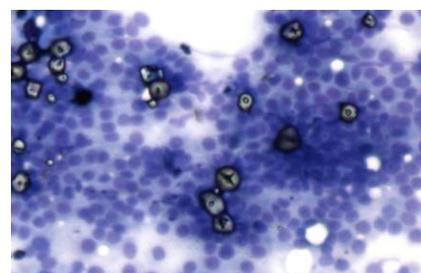
Concurrent disease can complicate the diagnostic use of cTnI. Of particular concern is chronic renal disease, which has been reported to cause elevated cTnI due to multiple factors including changes in cardiac circulation and hypotension. However, the study concluded that measurement of cTnI may be useful for long-term management of MVD.

Reference: Polizopoulou ZS, et al. *VCP* 43/2 (2014) 218 – 225.



What are these structures?

Multiple refractile, clear staining, round to globular structures with a central fissure are seen on a cytological preparation. What are they?



Source: <https://www.studyblue.com>

Answer over the page...

Which urine test should I select?

Vetpath offers several options for urine testing, and it can sometimes be difficult to decide which test is most appropriate.

We offer these different tiers of testing to allow you to obtain the information you require for the most economical price. Testing options include:

Urine wet microscopy (micro):

This test includes a urine specific gravity, pH and microscopic examination of the urine sediment. This provides information on leukocytes (figure 1), red blood cells, crystals, casts, bacteria and debris. A urine wet micro may be appropriate if a dipstick has already been performed in house.

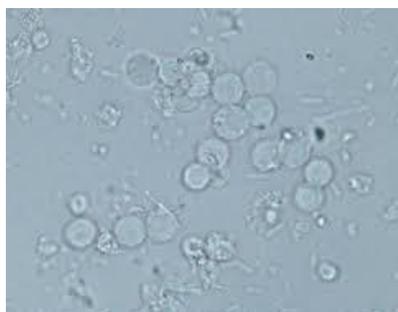


Figure 1: Leukocytes in urine

Source:<http://www.eclinpath.com/category/urinalysis/>

Urinalysis

The urinalysis is a urine wet micro (urine SG, pH and sediment examination) PLUS a

dipstick assessing the biochemical components of the urine. This includes blood, protein, glucose, ketones, and bilirubin. Note that the pads for urine SG, urobilinogen and leukocytes on urine dipsticks are not used in veterinary species.

Cytology and urinalysis

Urine cytology can be included with the urinalysis to assess for abnormal epithelial cells with Leishman's stain (figure 2). Cytology is therefore only indicated when a bladder neoplasm is suspected. Take care to use the correct terminology as cytology and microscopy are NOT interchangeable terms. Also remember that cells degenerate very quickly in urine and therefore urine for cytological assessment should be sent to the lab as soon as possible. A fresh urine sediment smear is also useful to maximise cell preservation.

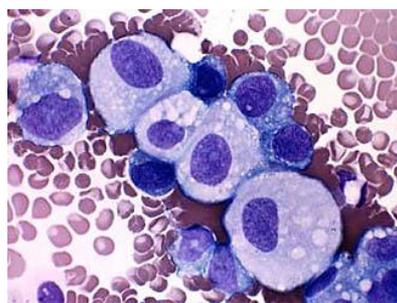


Figure 2: Atypical epithelial cells in urine sediment.

Source:http://vetbook.org/wiki/cat/index.php/Transitional_cell_carcinoma

A culture can be added on to a urine wet micro, urinalysis or cytology.

FIP Screen discontinued

The alpha-1 acid glycoprotein test is now unavailable and consequently, Vetpath will **no longer be offering the FIP screen.**

The Feline Coronavirus titre and albumin:globulin ratio continue to be available for testing for FIP. If you have any questions regarding FIP testing, please call the laboratory to speak with a pathologist.

The structures are.....

.....glove powder.

Glove powder particles (also called starch granules or corn starch) have a distinctive round appearance with a central fissure. They are often refractile (shiny) and can be individual or present in large sheets.



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