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.

VNews

VETPATH LABORATORY SERVICES

FEBRUARY 2020

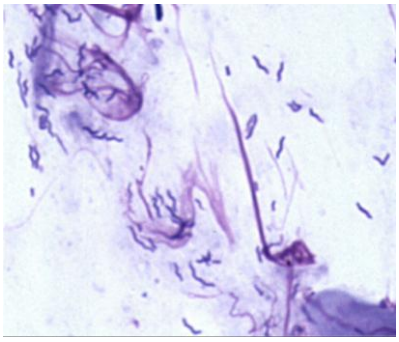
Is acute polyradiculoneuritis in dogs associated with *Campylobacter* infection?

A recent study published in JVIM by a group based in Australia investigated whether *Campylobacter* infection was a risk factor in acute polyradiculoneuritis (APN) in dogs.

APN (originally named "coonhound paralysis") is the most commonly identified acute generalised peripheral neuropathy in dogs worldwide, and is characterised by the acute onset of lower motor neuron signs, including acute symmetrical ascending motor weakness, hyporeflexia and dysphonia. It is an immune mediated disease which especially affects the ventral spinal nerve roots.

Campylobacter spp is considered a major triggering factor in a similar disease in humans (Guillain-Barré syndrome, GBS), and a study in New Zealand found that food safety measures to decrease contamination of fresh poultry meat also resulted in fewer cases of campylobacteriosis as well as a decreased incidence of GBS.

Faecal samples were collected from dogs affected by APN (24) and control dogs (47) and checked for *Campylobacter spp* by direct culture and DNA extraction, and PCR. If the faecal sample was collected within 7 days of the onset of clinical signs, dogs with APN were 9.4 times more likely to be positive for *Campylobacter spp* compared to control dogs. In addition, there was a significant association between dogs affected by APN and the consumption of raw meat.



Spiral shaped bacteria which may be *Campylobacter spp.*

Campylobacter spp is difficult to culture and special media and conditions are required. The faecal multiplex PCR test offered at Vetpath includes *Campylobacter spp.*, however identification of potentially pathogenic species of *Campylobacter* would require culture. Interpretation of faecal PCR results should also occur in conjunction with the clinical history of the patient.

Reference:
JVIM 2018; 32; 352-360.

Image source:
Optimal fecal assessment in Clinical Techniques in Small Animal Practice Vol 18, Iss 4, Nov 2003, pp 218-230.

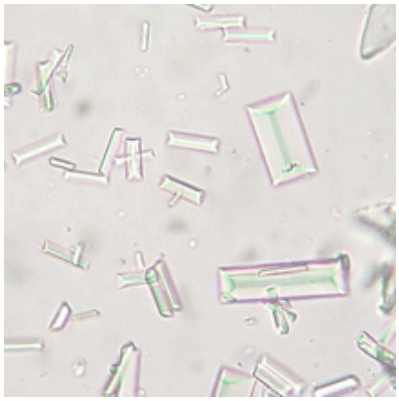
Vetpath Laboratory Services welcomes feedback on all aspects of our service from couriers to lab results. Please feel free to contact us at 9259 3666 or email enquiries@vetpath.com.au

Storage of urine

Immediate analysis of urine is often not possible due to the time required to transport samples to the laboratory.

A delay in analysis can result in increased pH, microbial proliferation and degradation of cells and casts. Urine should be stored in the refrigerator until submission to the laboratory to reduce these changes. The samples are brought to room temperature at the lab before processing.

Urine cytology can be requested if a urinary bladder neoplasm is suspected. Epithelial cells in urine degenerate very rapidly and prompt submission of these samples to the laboratory is recommended.



Struvite crystals.

Reference:
http://eclinpath.com/urinalysis/sample-collection/

Cytology slide preparation

Receiving an inconclusive cytology interpretation can be frustrating. Although this outcome can be due to low cellularity, poor smear preparation can also be a contributing factor.

The aspirated material must be smeared onto the slide to create a monolayer. The most effective way to do this is to use a spreader slide either perpendicular (as in figure 1) or parallel to the main slide. Gravity is the only pressure required and additional pressure may result in rupturing of the cells (figure 2).

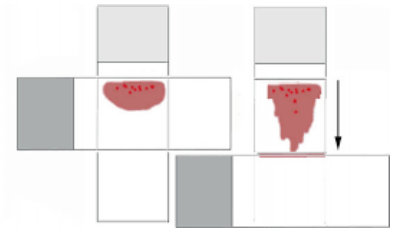


Figure 1. Spreading aspirated material onto a slide.

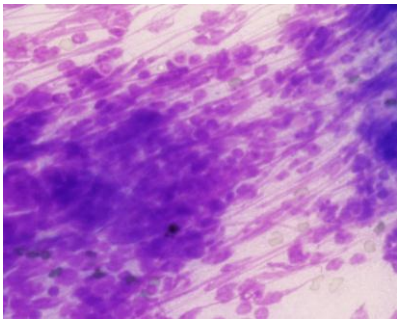


Figure 2. Ruptured cells.

Some clinicians do not smear the aspirated material, thinking that this will prevent cell rupture. However, this results in the formation of dense droplets containing cells that cannot be adequately visualized (figure 3).

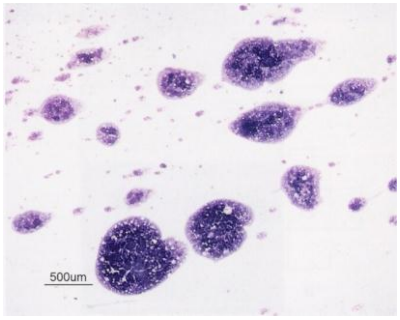


Figure 3. Dense, inadequately smeared droplets.

Aim to have cytology slides look similar to that in figure 4. Gentle smearing of the material along the slide will hopefully result in a monolayer of intact cells for evaluation.

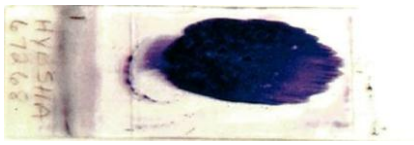


Figure 4. A well-made smear.

NATA

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