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

JUNE 2017

Canine Parvovirus-2c in Australia

A new strain of parvovirus, CPV-2c, has recently been identified in Australia. This news has received intense media attention and many clinics are receiving questions regarding diagnostic testing for CPV-2c.

This strain is the one most commonly detected in the USA and Europe, and can cause disease in adult dogs as well as puppies. Disease can occur in dogs that have been vaccinated, though the disease tends to be milder in these animals.

A news link has recently been released reporting that this strain is usually not detected by in-house tests. However, the detection rate if CPV-2c using in clinic tests such as Megakor FASTest® and Witness® Parvo test has so far been comparable to detection of other strains of parvovirus.

The in house antigen tests are less sensitive than molecular techniques (PCR) for all strains, and so a negative result does not rule out parvovirus infection. If the dog has clinical signs compatible with parvovirus infection and a negative antigen test, consider having a faecal PCR test done. Bear in mind that the faecal PCR may detect parvovirus from vaccinations administered up to 3-4 weeks earlier.

Reference: The Veterinary Journal (2013); 198:504-507

How long does a culture swab last?

A common question we are asked is how long can a culture swab stay on hold and still be viable?

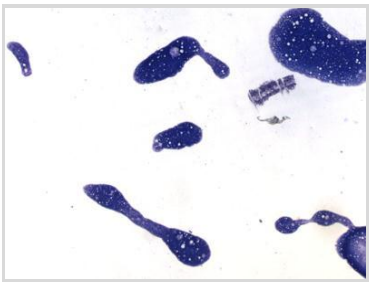
Ideally a swab should be cultured as soon as possible. Approximately 48 hours is the maximum time you can wait before culturing a swab. The swab should be stored in culture media in a cool, dry place and not refrigerated. A swab should not be held for culture until after histopathology results are issued, as the microorganisms may no longer be viable. Cytological assessment of tissues is a quick and effective method of determining whether culture is warranted before the histopathology is reported.

Why is my cytology inconclusive?

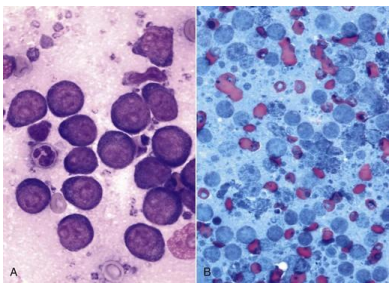
We understand that an interpretation of inconclusive on a cytology report is frustrating. It is frustrating for pathologists also when a less than ideal sample is submitted.

Avoiding some of the more common mistakes will help to maximize the diagnostic potential of your samples. Some of the more common problems include:

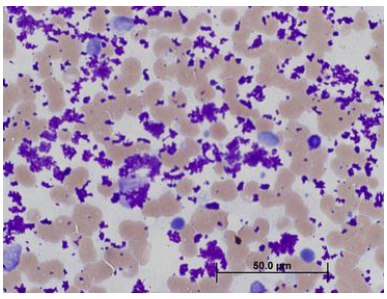
1. Smears are too thick.
The figure below displays the typical appearance of the "splat" technique where the aspirated material is sprayed on the slide and not smeared adequately. This results in the material being too dense to visualize individual cells. This is particularly a problem when the aspirate contains a large amount of blood.



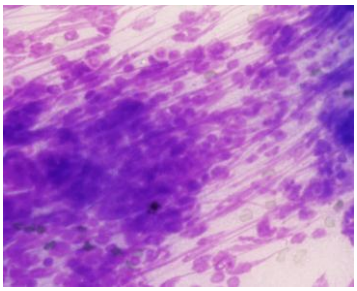
2. Poorly stained.
We are happy to evaluate Diff Quik stained smears. However, it is advisable to also submit some unstained smears for staining at the laboratory. The figure below displays the same cytological preparation that has been stained differently. The left side is stained adequately, however the right side is poorly stained which makes the cell features much harder to see. Cytological diagnosis may not be possible if only poorly stained smears are submitted.



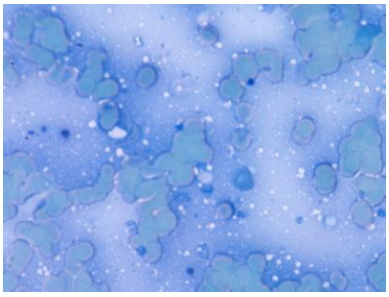
3. Contamination with ultrasound gel.
Ultrasound gel appears as clumped magenta material that can obscure cells. If enough is present, the cellular elements may not be identifiable leading to an inconclusive result.



4. Excessive pressure
Cells are very fragile and are easily ruptured if excessive force is used during smearing. This is particularly problematic when the aspirate contains a very small amount of blood.



5. Exposure to formalin
Exposure to formalin fumes or liquid results in poor staining of the slides. The stain is unable to penetrate the cells and they are therefore unidentifiable.



So what constitutes a good cytology smear? Smears should be thin preparations that are gently smeared and are not too bloody. Remember to submit up to 6 slides to maximize your chance of a diagnostic sample.

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