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 2018

What sample should I submit?

It is sometimes difficult to know what to submit when faced with a lesion that needs to be cultured.

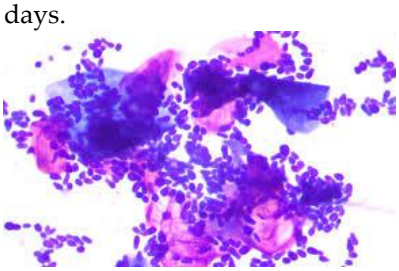
Samples can be submitted for **bacterial culture** a number of ways. Fluid in a sterile plain (not EDTA) tube or a swab in culture medium can be submitted. A smear of the lesion can be submitted for Gram staining at the same time as the swab is prepared. Guarded mare swabs should be broken off and placed in media. Tissue biopsies (1cm^3 or larger) should be wrapped in gauze, moistened with sterile saline and placed in a urine pot. Skin surfaces are prepared as for surgery and excess disinfectant dried off before sample collection. Blood or fluid (eg synovial) can be submitted in a blood culture bottle. The venepuncture site needs to be sterile, and the bottle top decontaminated with 70% alcohol.

Aerobic cultures can be performed on all samples. **Anaerobic cultures** may be most relevant in lesions not exposed to air such as inflammatory effusion samples, abscesses, bile, blood, CSF, joints or tissue biopsies. Anaerobic bacteria survive for a limited period of time, and are rapidly killed by refrigeration and exposure to air (within seconds in some cases). Once a sample is collected for anaerobic culture, it is best kept at room temperature and submitted promptly. Urine samples for culture can be refrigerated if submission is delayed.

For a **non-healing wound culture** (aerobic and anaerobic cultures, ZN stain and extended incubation) a sample of fluid or tissue is preferred, though a swab can be used if unavoidable. The sample should not be refrigerated, but stored in a cool, dry place.

Samples for **fungal culture** can be collected as for bacterial culture. Fungi can also be cultured from hair samples in cases with suspected dermatophytosis. Cultures are examined for growth for up to 4 weeks, depending on whether anything grows. **KOH preparations** of hair plucks can be examined for fungal spores, and provide quick, though not sensitive, detection of dermatophytosis.

Samples submitted for **PCR** (bacterial or viral) can include faeces, BAL fluid, or a swab placed dry into a sterile container e.g. a sterile urine pot. Samples collected into bacterial culture medium are not suitable. DNA is fairly robust and dry swabs can be stored, preferably in the fridge, for a number of days.



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

What is canine leproid granuloma syndrome?

Canine leproid granuloma syndrome (CLGS) is a nodular cutaneous disease caused by a species of *Mycobacterium* that has only been partially characterized by PCR.

CLGS is characterised by the development of firm cutaneous nodules that are a few millimetres to several centimetres in diameter. Most lesions are on the pinnae, however they can also be found on the head, muzzle, forelimbs and trunk. The lesions are confined to the skin and do not affect regional lymph nodes or internal organs, but can become ulcerated. The mode of transmission is suspected to be via biting insect, but has not been confirmed.

Cytological and histological evaluation of tissues reveals a pyogranulomatous inflammatory response with multinucleate giant cells and lymphocytes. Intracellular bacteria are often see within macrophages, and are negatively staining, rod-shaped organisms. (figure 1). The organisms are positive on Ziehl Nielson stains (figure 2).

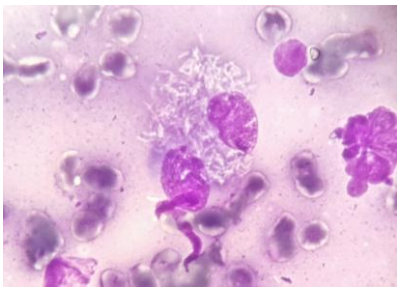


Figure 1: Intracellular rod shaped organisms consistent with *Mycobacterium sp* in a Wright's stained cytological preparation.

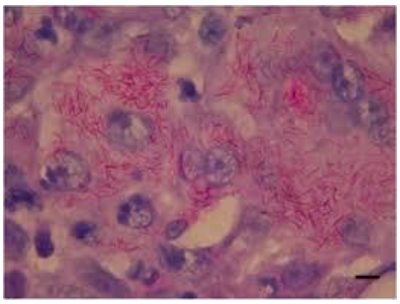


Figure 2: Acid fast *Mycobacterium sp* in a Ziehl Nielson stained histological preparation.

The organism causing CLGS is highly fastidious and therefore difficult to culture. Diagnosis is based on the presence of typical skin lesions, cytological and histological findings, and PCR testing (if available).

The granulomas may spontaneously resolve in 1 to 3 months. If the disease is progressive or wide spread, antibiotic therapy may be effective. Mycobacterial organisms that cause CLGS are not transmitted directly to humans, and therefore do not pose a zoonotic risk.

Reference: Sykes, JE. 2014. *Canine and Feline Infectious Diseases*. Elsevier.

ACTH stimulation tests

An ACTH stimulation test can be used in a number of clinical situations including diagnosis of adrenal disease and therapeutic monitoring.

We often have ACTH stimulation tests submitted with a very precise description of the test procedure but no clinical history. While we appreciate the effort you have gone to by writing the protocol used, we do not need this information to interpret the results, and will assume that you have done the test correctly. What we need to know is WHY you are doing the test is the first place! Please try to provide a few words on the submission form such as "HyperA?", "HypoA?" or "On Trilostane").

Help us to help you!

NATA

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