



CTDS News

We welcome a new face to CTDS this month; Barry Midgley joins the CTDS team as courier and supplies manager.

Immunotherapy

We have had a number of reports recently of excellent responses to immunotherapy which we supplied based on our environmental IgE results. We purchase immunotherapy from ARTU, who manufacture the only licensed immunotherapy available in Europe.

As part of the changes in medicines legislation taking effect from 31st October 2005, the VMD will be introducing a charge for each Special Import Certificate required in conjunction with the import of immunotherapy. The certificates are valid for one year and relate to each individual animal treated. Our immunotherapy prices increase from 1st November to reflect this charge and will be £98 & VAT for up to four allergens and £124 & VAT for up to eight allergens. The 10ml vials contain sufficient immunotherapy for approximately 10 months treatment, making this a cost-effective alternative for atopy.

Recently, there has been some promising work looking at the use of immunotherapy in the management of feline asthma and for the future this may be worth considering. Please contact Katie for further information on immunotherapy.

New tests

Feline PKD – polycystic kidney disease – PCR test for diagnose autosomal dominant polycystic kidney disease. Test available for both diagnosis and genetic screening in cats. Sample requirements are either 0.5ml EDTA or buccal mucosal swab.

Cyclosporine assays – 0.5ml EDTA sample take at trough prior to pill.

Please contact the laboratory for further information.

Histology

Following last month's article on cytology this month we concentrate on histology. Histopathology can often be used in conjunction with cytology.

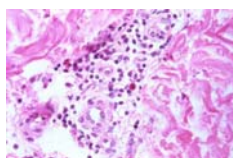
Sampling tips.

Histology samples should be submitted in 10% formalin – in secure screw topped pots. Pre filled pots are available from CTDS in 2 sizes, regular (pack of 10 containing 20ml of formalin) and large (pack of 5 containing 50ml formalin). Alternatively if you wish to prepare your own pots concentrated formaldehyde (usually 40-50%), available cheaply from wholesalers, can be diluted 1 part with 9 parts tap water to produce 10% formalin.

a). Skin biopsies.

To ensure representative samples, skin should **not** be rubbed, shaved or scrubbed prior to biopsy. Hair should be clipped and an alcohol wipe may be used.

Please send large 6-8mm diameter punch biopsies – these should follow the line of hair shaft and reach the subcutaneous fat where feasible. Take as many biopsies as possible from the affected areas and a biopsy from clinically normal skin if possible. These will be charged as one case irrespective



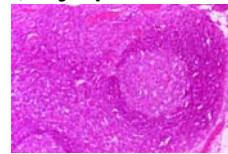
Chronic urticaria - canine

of however many skin samples are sent. Choose early lesions if possible except in primary alopecia where well developed lesions are more appropriate. Discrete lesions should be biopsied at the junction between normal and abnormal tissue.

For cases of suspect auto-immune skin disease a wedge biopsy of a fresh lesion is preferred - punch biopsies tend to rupture vesicles. It should be noted that steroid treatment reduces skin inflammatory processes and should be avoided for at least 10 days prior to biopsy.

Suspect atopic cases may also benefit from one of CTDS's allergy panels where steroid avoidance is unnecessary – contact the lab for further information on blood allergy tests and immunotherapy.

B). Lymph nodes



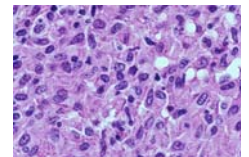
Normal lymph - canine

Please send whole nodes for histology as these give more reliable results than wedge biopsies.

If the node is more than 1cm thick a single incision along its length aids fixation.

C). Gut samples

Thin strips of gut should be adhered to slightly absorbent card to prevent curl and help orientation. Lay the fresh biopsy onto card so that serum seeps into the card (**gentle** pressure with a wooden tongue depressor can aid adhesion), leave for 30 seconds and then place in formalin. Please be as gentle as possible and do not use pins. Endoscopic samples of gut should be placed in formalin without handling.



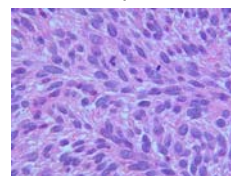
Granuloma -feline

D). Liver, kidney etc

Tru cut biopsies are useful in investigating liver, kidney and external neoplasias especially when general anaesthetic is inappropriate.

E). Tumours

Please do not trim the edges of possible tumours as these are the most important areas that aid prognostic evaluation.



Soft tissue sarcoma - feline

Depending on the site, the following types of biopsy may be used, needle-core biopsy (Tru cut), pinch or punch biopsy, incisional biopsy or excisional biopsy. Contact the laboratory for information on techniques.

Histology is available from CTDS at £23.00 per case (up to 3 distinct tissues), TAT 2-4 working days.

Case of the month

The clinical signs seen in acute leukaemia tend to be non-specific in both dogs and cats with lethargy and anorexia being commonly reported. In cats, anaemia and splenomegally are also common findings. Contd.....

We recently received a sample from Kitty, a 6 year old DSH who had presented with anorexia, severe dental disease and appeared very pale. In house bloods had failed to give diagnostic results so we received samples for an anaemia investigation (FBC, reticulocyte count & Coombs). The results are shown in table 1 and indicated a severe non regenerative anaemia, severe thrombocytopenia and a marked leucocytosis dominated by abnormal blasts.

Table 1:
Haematology

RBC	1.78	5.5-10.0
HB	4.3	9.0-17.0
HCT	11.3	27.0-50.0
MCV	64.0	40-55
MCH	23.9	13-21
MCHC	37.5	30-36.5
PLT	49	170-650
WBC	53.57	4-15
Neutrophils	4.29	2.5-12.5
Lymphocytes	1.62	1.5-7.0
Monocytes	0	0-0.8
Eosinophils	0	0-1.5
Other cells	47.68	
Coombs Test	Positive @1:32	
Reticulocyte count	54.18	<60

Feline Blood film examination: Red cells appeared normochromic with moderately increased anisocytosis and a population of microcytic, normochromic cells (probable spherocytes). Occasional small autoagglutinates noted. Leucocytes comprised a population of atypical, intermediate size blasts predominantly, possessing irregularly shaped nuclei with finely granular chromatin and solitary or multiple nucleoli. Cytoplasm was moderately extensive, pale and basophilic and not infrequently contained discrete clear vacuoles. Very occasional mature neutrophils and small lymphocytes noted. Platelets appeared markedly reduced with no evidence of platelet clumps or clots on the EDTA smear -ks/dm

Identifying the cell line of origin of blasts based only on their morphology can be difficult and in dogs we often now use flow cytometry to assist identification. However, in cats validated markers for flow are not available in the UK and the morphology of cells in blood and bone marrow remains the accepted standard.

In this case the blasts (see figure 1 and 2) showed criteria suggesting that they are of myeloid origin and acute myeloid leukaemia (AML) was diagnosed. We were greatly helped by

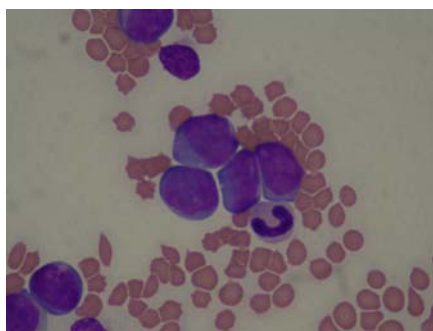


Figure 1

and the term myeloproliferative disorder (MPD) is used.

the submission of very good air dried smears from the practice. These make a big difference in these cases as blast cells tend not to be very stable and often quickly lyse or distort in EDTA. Sometimes however the blasts cannot really be categorised

Reductions in other cell lines often accompany AML as a result of infiltration and replacement of the bone marrow by the leukaemic cells. In this case however it seemed likely given the spontaneous agglutinates, positive Coombs and increased MCHC, that there was a concurrent immune mediated component to the severe anaemia. We see these occasionally in cases of both lymphoproliferative and myeloproliferative disease (MPD).

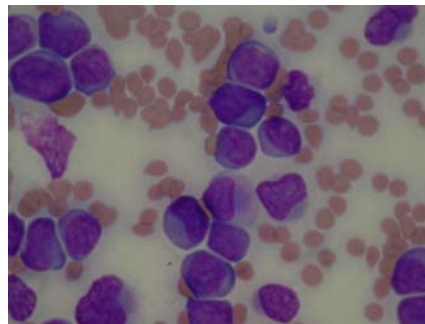


Figure 2

acute lymphoblastic leukaemia using aggressive chemotherapeutic protocols (survival time 1-7 months). For AML in cats, low dose cytosine arabinoside has been investigated. This appears to be associated with the induction of partial or complete remission in some cases however remissions tend to be short lived (3-8 weeks).

Kitty had been checked for Felv and FIV, both of which may be associated with MPD, but was found to negative for both tests.

The outlook for all acute leukaemias remains poor. Some success has now been reported with

Avian liver disease

Liver disease can occur in pet psittacine birds of all species and ages. Infectious causes are most common in young birds but in older birds degenerative disease is a more common cause.

Clinical signs can be non specific and depend on the severity of the disease – these can range from anorexia, listlessness and feather fluffing. Jaundice is rare in birds since they produce biliverdin rather than bilirubin but more specific signs include polyuria/polydypsia, yellow urates and occasionally palpable, enlarged livers. A good history is important since exposure to other birds, diet and illness amongst family members are important facts to ascertain. As a complication it is not uncommon for multiple organ diseases to be associated with avian liver disease.



Chlamydia can cause liver disease and is more common in younger birds and other bacterial/viral causes should be considered e.g. Pacheco's disease (PDV). In new stock or birds with uncertain history's Psitticosis may be considered. Older birds may have degenerative liver disease such as hepatic lipidosis (AFLD); hepatic neoplasia has been described in birds, including biliary adenocarcinoma in Blue Fronted Amazon Parrots.

To aid diagnosis initial bloods should be performed to include a full blood count, biochemistry including GLDH and bile acids (CTDS Avian profile AP). Infectious agents may also be considered (please contact for sample details), radiographs, ultrasound and biopsy may be further warranted depending on the signalment.