



### CASE OF INTEREST

Oral Eosinophilic Granuloma in a Siberian Husky

By: Sonja Rivers, Veterinary Pathologist.

A 2 year old, male, Siberian Husky presented with a friable, raised mass ventral to the tongue. Histology revealed it consisted of an ulcerated portion of granulation tissue containing multiple granulomas (figure 1), each composed of a central aggregate of eosinophilic debris (flame figure) surrounded by large numbers of eosinophils and macrophages (figure 2).

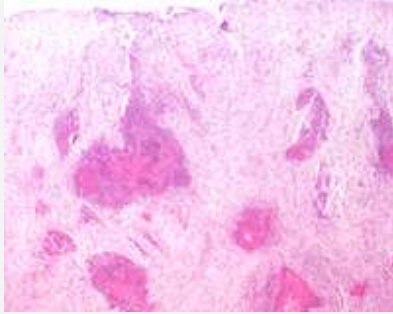


Figure 1. Low power view of glossal mucosa displaying superficial granulation tissue formation and multiple granulomas beneath (obj x10, HE stain). Click to enlarge.

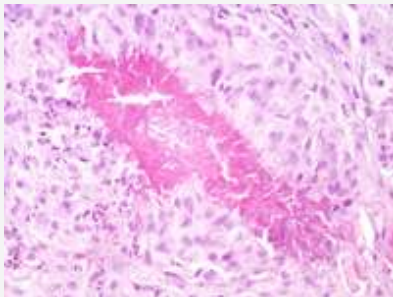


Figure 2. High power view of a palisading eosinophilic granuloma each composed of a central aggregate of eosinophilic debris (flame figure) surrounded by large numbers of eosinophils and macrophages (obj x40, HE stain.) Click to enlarge.

This lesion was consistent with oral eosinophilic granuloma. The condition generally presents as well-demarcated, vegetative plaques or nodules that commonly ulcerate. Most are painful. The most frequently affected areas are the lateral and ventral aspects of the tongue and the commissures of the mouth.

The cause of the condition is not known but a hypersensitivity-type reaction and trauma are proposed aetiologies. Additionally several strong breed dispositions have been identified and this suggests a possible genetic predisposition. Breeds affected include Siberian Huskies and Cavalier King Charles Spaniels. Male Siberian Huskies less than 3 years old are at increased risk. German Shepherd Dogs are also possibly predisposed. The condition has also been described in a Crossbreed dog and Bullmastiff and we have seen similar lesions in a Pekingese, so it seems a variety of breeds can be affected.

The condition generally responds well to corticosteroid therapy.

Canine eosinophilic granuloma has also been described in the skin. Commonly affected areas include the muzzle, pinnae, neck, axillae, flank, prepuce and scrotum. Very rarely the condition has been described in the ear canal. Unlike the oral lesions, cutaneous lesions are not usually painful and pruritis is generally absent. No breed predilections have been noted and as the lesions are not clinically distinctive diagnosis relies upon histology.

#### References:

- Skin Diseases of the Dog and Cat, 2nd edition, Gross, Ihrke, Walder and Affolter pages 358-360.

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#### JOURNAL Reviews(with e-links)

**1. CYTOLOGICAL VERSUS HISTOPATHOLOGICAL DIAGNOSIS IN CANINE OSTEOSARCOMA.** Loukopoulos P, Rozmanec M, Sutton RH. Vet Rec. 2005 Dec 10;157(24):784. [Link](#) **Trevor Whitbread BSc. BVSc. MRCVS DipECVP**

Cytological examination is very rarely diagnostic and should only really be used as a guide. In this letter to the Veterinary Record the authors show, albeit in a small sample, that 70% of their cases had a histological and a cytological diagnosis in partial or full agreement. In those successful cases it was possible to indicate neoplasia of mesenchymal origin, but in only 20% did the cytology indicate bone origin of the tumour. In 20% of the cases the cytological diagnosis did not agree with the histopathology and was considered to be misleading. The biggest difficulty in interpreting cytology samples is the quality of the sample itself and this is particularly a problem with bone lesions as representative histological examples of the lesion can be difficult to obtain. Some may consider that 70% success rate with cytology is good enough as a diagnostic method, but this also indicates that cytology should be used as a guide and should not be considered a definitive diagnosis. The only exception would be for mast cell tumours, the cytology of which is generally diagnostic, but cytology is a poor method of grading these tumours.

**2. CANINE DIGITAL TUMOURS: A VETERINARY COOPERATIVE ONCOLOGY GROUP PERSPECTIVE STUDY OF 64 DOGS.** C.J. Henry, *et al.* J Vet Intern Med 2005; 19:720-724 [Link](#) **Judith Hargreaves MVB MRCVS MRCPATH**

This is a large case series with a wider remit than previous studies, which have featured canine digital tumours. Tumours involving the pad have been excluded for reasons not discussed by the authors. Squamous cell carcinoma and malignant melanoma predominated. Their one year and two year survival times were similar at 50%/44% and 18%/11% respectively. Survival time figures however included deaths from non-tumour related causes. This paper also sets out the clinical staging for canine digital tumours, T3 and T4 tumours having greater potential for metastasis but this not necessarily affecting overall survival time. There was perhaps a surprisingly low incidence of benign nail bed tumours in this study, with only one nail bed inclusion cyst present. As in previous studies there were a small number of dogs with apparently unrelated squamous cell carcinoma affecting more than one toe. This seems to occur in darkly pigmented dogs such as Black Standard Poodles, Black Labradors, Giant Schnauzers and Rottweilers and they therefore have suggested increased vigilance for further tumours developing in these types of breeds. Other recommendations were for early surgical intervention regardless of the tumour-type or the presence of metastatic disease.

**3. FINE-NEEDLE BIOPSY OF EXTERNAL EAR CANAL MASSES IN THE CAT: CYTOLOGICAL RESULTS AND HISTOLOGICAL CORRELATIONS IN 27 CASES.** De Lorenzi et al, Vet Clin Pathol. 2005; 34:100-105 [Link](#) **Judith Hargreaves MVB MRCVS MRCPATH**

Cytology of ear canal masses from swabs produces poor results. Here the authors recommend fine needle aspiration as a superior technique. This is particularly useful for differentiation between inflammatory and neoplastic

- Bredal, W.P., Gunnes, G., Vollset, I & Ulstein, T.L. (1996) Oral eosinophilic granuloma in three Cavalier King Charles spaniels. J Small Animal Pract 37, 499-504.
- Madewell, B.R., Stannard, A.A., Pulley, L.T. et al. (1980) Oral eosinophilic granuloma in Siberian Husky dogs. J Am Vet Med Assoc 177, 701-3.
- Vercelli, A. & Cornegliani, L. (2002) Oral eosinophilic granuloma in two German Shepherd dogs. In: proceedings of the 18th ESVD/ECVD Meeting, Nice, p.243.
- Walsh, K.M. (1983) Oral eosinophilic granuloma in two dogs. J. Am Vet Med Assoc 183, 323-4.

conditions, which would obviously influence clinical approach. The distinction between benign and malignant lesions poses more problems. Evidence of invasive growth, which can only be assessed by histology of the margins, is considered the gold standard in diagnosis.

An attempt to obtain clear margins may necessitate ear canal ablation with or without bulla osteotomy and in such cases it is recommended that all this tissue be submitted for histological examination. (From personal experience, if there is no obvious mass remaining due to a prior biopsy, it is useful to try and indicate to the pathologist where the original mass was located). The same recommendations are likely to apply to the dog, as the spectrum of lesions is similar.

## LATEST NEWS

### Immunohistochemistry: Who needs it?

Veterinary medicine has progressively improved its therapeutic spectrum, especially in oncology, demanding a more accurate diagnosis. This fact has brought to the attention of veterinary pathologists the need to improve the application of immunohistochemistry in their daily routine, following the tendency of human diagnostic pathology.

The fundamental concept behind IHC is the demonstration of antigens (Ag) within tissue sections by means of specific antibodies (Abs). Once antigen-antibody (Ag-Ab) binding occurs, it is demonstrated with a coloured histochemical reaction visible by light microscopy.

Antigens most commonly identified are those expressed by tumour cells leading to identification of their origin and thereby giving a more accurate prognosis. Antibodies can also be directed against infectious agents such as Toxoplasma organisms to confirm their presence. This means a pathologist needs to decide upon which marker they require.

The cost of the panel of markers varies considerably depending on the cost of each antibody and how many different antibodies are needed. An example would be those of cells which appear hystiocytic on light microscopy but could also be morphologically consistent with lymphoid cells i.e. T cell.

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## SIDE STORY

### Hypertrophic cardiomyopathy (HCM) in cats

Excerpt from FAB website: It is now also believed that HCM in cats could also be genetic. Recently, a genetic mutation was found in an inbred colony of Maine Coon cats in America. The same mutation was found in all the affected cats, confirming that in this colony, HCM is due to a genetic mutation. As yet, it has not been shown whether or not the same mutation exists in just this one family of Maine Coons, or whether the same mutation is present in Maine Coon cats throughout the United States. This mutation may not be present in all cats with HCM and other mutations may be responsible.

The Feline Advisory Bureau, together with the Veterinary Cardiovascular Society (VCS) have set up a scheme to detect the presence or absence of hypertrophic cardiomyopathy(HCM).

[Further Info:](#)

## OUR DETAILS

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Where we are: [Multimap Link](#)

## BIOPSY TIPS - Post Mortem Tissues

- Submission of post mortem samples from animals which have died unexpectedly or due to an unknown disease should include moderately sized pieces of tissue in 10 times the volume of formalin.
- Submissions of the above should include representative samples of all major visceral organs including several pieces of gastrointestinal tract, pieces of tissue from more than one lung lobe and the heart whether whole or several pieces.
- There are no additional costs over the normal histology fee for this service.
- If tissue is too plentiful to send in formalin it should be stored and the tissue, when fixed, can be sent using a suitable double bagged and protected method without formalin.

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