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Friday, 14 September, 17:15

Lack of detection of circulating skin-specific IgE autoantibodies in dogs with moderate or severe atopic dermatitis

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Human patients with atopic dermatitis (AD) commonly exhibit IgE reactivity to human protein antigens located in a variety of cells and tissue types. The presence of serum IgE autoantibodies appears to correlate with disease severity, and these autoantibodies are suspected to reflect or contribute to tissue damage. The objective of this study was to determine whether IgE autoantibodies specific for cutaneous antigens could be detected in the serum of dogs with moderate or severe AD. Nineteen dogs were selected based on the following criteria: a diagnosis of AD based on standard methods, demonstration of skin or serum IgE reactivity to common environmental allergens, a CADESI-02 lesional score superior to 50, signifying active disease of at least moderate severity, and a lack of recent treatment with glucocorticoids or calcineurin inhibitors. Sera from four healthy dogs were used as negative controls. A two-step indirect immunofluorescence was performed using normal canine skin collected at four different locations (concave ear, nose, medial thigh and lateral thorax). Immunoblotting was done similarly using normal canine epidermal and dermal extracts and reducing conditions. In both methods, IgE was detected using a monoclonal antibody specific for a heat-stable epitope of canine IgE. At 1 : 10 dilution, IgE autoantibodies specific for cutaneous antigens were not detected, with either method, in atopic vs. normal canine sera. In summary, either IgE autoreactivity is not associated with active AD in dogs, or the methods employed herein were not sensitive enough to permit IgE autoantibody detection.

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Friday, 14 September, 17:20

A blinded randomized controlled crossover trial evaluating the usefulness of a novel diet (Aminoprotect Care) in Maltese-Beagle atopic dogs spontaneously allergic to corn

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Aminoprotect Care (APC) is a novel prescription diet composed of amino acids, potato proteins and cornstarch. The objectives of this study were to determine whether Maltese-Beagle atopic (MBA) dogs spontaneously sensitive to corn exhibited clinical signs and changes in immunological markers after being fed APC. The study was designed as a blinded randomized active-controlled crossover experiment. Ten MBA dogs exhibiting clinical signs of allergy within 5 days of ingesting corn were selected. Dogs were randomized to be fed either their maintenance diet with corn or APC for 5 days. After a washout of 2 weeks, diets were switched. Before and daily during each intervention phase, skin lesions were graded by one investigator while pruritus was assessed by another. Before and at the end of each intervention, the percentage of circulating CD4+ CCR4+, corn-activated CD4+ CD25+ T-lymphocytes and serum corn-specific IgE was measured. During this trial, pruritus and skin lesions increased significantly in MBA dogs when ingesting corn while no such increase was seen when fed APC. Total, median and maximal pruritus values were significantly higher in MBA dogs ingesting corn compared to APC. There were no significant differences between or during interventions in any of the immunological parameters. In summary, even though APC contains cornstarch to which corn-sensitive MBA dogs often react, the ingestion of APC did not lead to significant increases in either skin lesions or pruritus. Aminoprotect Care might prove valuable for the management of cutaneous adverse food reactions. These observations must be validated in large field studies.

Funding: Nosan Corporation, Japan.

Friday, 14 September, 17:25

An open pilot (phase II) trial testing the efficacy of Proanthozone for treatment of canine atopic dermatitis

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The objectives of this trial were to evaluate the efficacy of a bioflavonol antioxidant complex (Proanthozone) to relieve signs of atopic dermatitis (AD) in dogs. Twenty-two dogs with AD and a CADESI-02 lesional score greater than 25 were enrolled in this study. Dogs were solely given Proanthozone tablets per manufacturer's recommendation for 45 days. Skin lesions and pruritus were reevaluated before, 2, 4 and 6 weeks after beginning the administration of Proanthozone. Efficacy was assessed based on percentage improvement of CADESI and pruritus scores from baseline and on the

overall assessment by clinician and owners at the end of the trial. Only eight dogs (36%) completed the study. Ten dogs were removed because of increasing CADESI scores after 2 or 4 weeks. Three dogs were withdrawn at the owner's request because of absence of improvement and one because of the concurrent use of oral glucocorticoids during the study. Two dogs (10%) were lost to follow up. Of the eight dogs that completed the trial, the median percentage improvement from baseline CADESI and pruritus scores were 23% and 34%, respectively. One dog (5%) showed a major overall improvement, which was assessed by both owner and clinician. A moderate overall improvement was recorded in five (22%) and three (14%) dogs, as assessed by owners or clinician, respectively. The results of this open pilot (phase II) trial suggest that Proanthozone administration does not cause reliable improvement of signs of AD in dogs.

Funding: Animal Health Options, Golden, Colorado, USA.

Friday, 14 September, 17:30

Cytological examination and quantification of *Malassezia* spp. on the skin of healthy cats

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Data on cytological criteria of value in the diagnosis of *Malassezia* overgrowth in feline skin are scarce. A prospective study was conducted to determine the number of yeasts present on selected anatomical sites in 18 healthy domestic cats without history of dermatological problems. Cats were feline leukaemia virus–feline immunodeficiency virus negative, and were not receiving any medical treatment at the time of sampling. They comprised 13 neutered males and five spayed females, 1–7.5 years of age (mean, 3.5 years). Samples from the mid-ventral abdomen ($n = 18$), ventral interdigital space ($n = 72$), face ($n = 18$) and chin ($n = 18$) were obtained for cytological examination. Hair was cut with scissors and one piece of clear acetate tape was pressed five consecutive times on the skin surface. The samples collected were stained with Diff-Quick, and 10 consecutive oil-immersion fields were examined with a light microscope. The mean number of yeasts observed was recorded. In five cats, yeasts were observed in only one anatomical site, in two other cats *Malassezia* organisms were present in two or three sites. Yeasts were detected in samples from the ventral interdigital space ($n = 5$), abdomen ($n = 2$), face ($n = 2$) and chin ($n = 1$). In nine positive samples, one yeast was detected (mean: 0.1 yeast), and in one, two yeasts were detected per 10 oil-immersion fields (mean: 0.2 yeast). Based on these results, *Malassezia* detection on cytological examination using acetate tape stripping in healthy cats appears to be rare. When present, more than one yeast per 10 oil-immersion fields is infrequently seen.

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Friday, 14 September, 17:35

Comparison of skin scrapes and hair plucks for detecting *Demodex* mites in canine demodicosis, a multicentre, prospective study

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The aim of this multicentre study was to compare the sensitivity of skin scrapes and hair plucks for collecting *Demodex* mites in dogs with demodicosis. In total, 161 dogs with localized or generalized, juvenile or adult onset demodicosis were included at the time of their initial examination. Lesional skin was selected and a standardized area was identified. Deep skin scrapes and hair plucks were performed at neighbouring sites within the same lesion area. Deep skin scrapes and hair plucks were also performed after skin squeezing on neighbouring areas within the same lesion. Material was collected on a microscopic glass slide with a drop of chloral lactophenol or mineral oil. This material was covered with a coverslip, and samples were examined with light microscopy with a 100x magnification. The samples were classified as either positive (demonstration of *Demodex* adults, larvae or eggs) or negative. There was no significant difference between skin scrapes and hair pluck in the proportion of *Demodex*-positive samples. Squeezing the skin prior to scraping significantly improved the number of positive samples compared to the other techniques. In conclusion, hair plucks can be recommended for diagnosing canine demodicosis, a technique easy to perform and well accepted by dogs and their owners, but skin scrapes after squeezing appear to be the most sensitive method to collect *Demodex* mites.

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Friday, 14 September, 17:40

Investigation of the efficacy of famciclovir in the treatment of feline herpesvirus-1 infection

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Famciclovir (Famvir, Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA) is the oral form of penciclovir. The antiviral effect of orally administered famciclovir has been demonstrated in several animal species. This effect is due to the conversion *in vivo* to penciclovir, which *in vitro* is active against herpes simplex 1–2, Varicella zoster virus, and cytomegalovirus. However, the effect of famciclovir on feline herpesvirus infection has not been fully evaluated. The purpose of this clinical study was to evaluate the clinical efficacy and any possible adverse reactions in cats with herpesvirus infection. Nine unvaccinated young cats were enrolled (mean age ± 2.9 months). Baseline data included history, physical examination, skin and

ophthalmic lesion, rhinitis, polymerase chain reaction-positive herpesvirus (FHV-1 on skin and conjunctiva samples), cytology and histopathological examination (three of nine cats). After diagnosing herpesvirus infection caused by FHV-1, all cats were treated with famciclovir at 20 mg per cat once daily (kittens) or 60 mg per cat once daily (young cats) for 4 weeks. The only additional treatment permitted was the washing of eyes and skin with Ringer's solution. After 4 weeks, all cats showed an evident reduction in skin and ocular lesions, and in seven of nine cats, there was complete remission of signs. Adverse effects of famciclovir were not observed either clinically or in blood tests. Although additional studies must be carried out, these results provide preliminary evidence for the benefit of famciclovir to treat feline herpesvirus infection caused by FHV-1.

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Friday, 14 September, 17:45

***Dermanyssus gallinae* infestation in two kittens**

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The red mite or poultry mite *Dermanyssus gallinae* is a mesostigmatid haemotropic mite that has been isolated from caged birds, domestic fowl, pigeons, and many other wild birds. The transmission of *D. gallinae* to cats, dogs and people usually occurs following exposure to poultry. This report represents the first detailed description of *D. gallinae* infestation in the feline species. Two 40-day-old cats living in a rural area close to a poultry pen were presented for general health evaluation. On physical examination, both cats appeared to be in poor body condition. Major findings were lethargy, weakness, hypothermia, dehydration, severe malnutrition and mild pruritus. Furthermore, mucous membrane pallor was observed and a complete blood cell count showed a marked normocytic normochromic regenerative anaemia, suggesting chronic blood loss. No abnormalities were detected on palpation of the abdomen, whereas auscultation of the thorax revealed a mild murmur, most likely secondary to the anaemia. Dermatological examination did not reveal any skin lesion; however, many small white ecto-parasites crawling in the hair and migrating freely to and from the cats were noted. Superficial skin scraping confirmed their identity as *D. gallinae*. To the authors' knowledge, *D. gallinae* infestation has not been documented in the feline species before. This finding may have important implication because of its impact on human health.

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Friday, 14 September, 17:50

Use of imatinib for treatment of a cat with refractory eosinophilic dermatitis and peripheral eosinophilia

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A six-year-old domestic short-hair cat was presented for severe eosinophilic dermatitis of more than 5-year duration. Restriction diets, antibiotics and cyclosporine (5 mg kg⁻¹ day⁻¹) were not helpful. Steroid administration (prednisolone at 2 mg kg⁻¹ day⁻¹; methylprednisolone acetate at 20 mg month⁻¹ or dexamethasone at 0.2 mg kg⁻¹ day⁻¹) only led to partial improvement. The addition of chlorambucil (0.2 mg kg⁻¹ day⁻¹) did not induce further improvement. The cat was thin and weak. Cutaneous lesions were localized to the right elbow (very large ulcerated plaque), left anterior limb (eroded plaque) and lips (indolent ulcer on both superior lips). The hard palate was completely ulcerated. Cytological examination of all lesions revealed eosinophilic inflammation. Histopathology confirmed a diagnosis of eosinophilic plaque. A blood count revealed hypereosinophilia (4.77 × 10⁹/L). Serological and polymerase chain reaction tests for feline leukaemia virus, feline immunodeficiency virus, herpes and calicivirus were negative. Due to the lack of response to standard-of-care therapy, the decision to prescribe imatinib was made because this tyrosine kinase inhibitor has been shown to be effective for treatment of hypereosinophilic syndrome in humans. In this cat, imatinib was given at 1.25 mg kg⁻¹ per os once daily. Lesion improvement was noticeable after 4 weeks of treatment, and a 90% regression of all lesions was observed after 16 weeks. Peripheral eosinophilia returned to normal after 10 weeks of imatinib administration. Adverse side-effects of imatinib were not seen. In this cat with refractory eosinophilic dermatitis, the good clinical response and lack of side-effects of imatinib should prompt further evaluation of this drug to treat animals with eosinophilic diseases.

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Friday, 14 September, 17:55

Epidemiological, clinical, histopathological and ultrastructural aspects of ichthyosis in golden retrievers: a report of 50 cases

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Ichthyosis is a primary cornification defect of suspected genetic origin reported in golden retriever dogs. Fifty cases were diagnosed in this breed between January 2003 and February 2007 at several referral dermatology clinics in France. Diagnosis was based on clinical and histopathological findings. A sex predisposition was not noticed (24 males/26 females). The mean age of onset of clinical signs ranged between 2 months and 3 years. Forty dogs developed lesions before 1 year. Clinical signs included mild to moderate generalized scaling characterized by small to large whitish, greyish or blackish scales. These scales were adherent over most of the body regions. Pruritus was absent. Histopathological features included a moderate to severe laminated or compact orthokeratotic hyperkeratosis, an

absence of epidermal acanthosis, a normal granular layer and more strikingly a disorganization of keratinocytes and a 'bridging' of hair follicle ostia by abnormal keratin. Follicular units were not distended by keratin, and hair shafts remained normal. The Ki 67 proliferation index of keratinocytes of affected dogs was not different compared to that of normal control dogs. Ultrastructural findings,

performed in two dogs, revealed the persistence of numerous corneodesmosomes compared to one control dog as well as crystalline structures within the stratum corneum. These findings strongly suggest that golden retriever ichthyosis is a retention but not a proliferation ichthyosis.

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