Accession Number
20163026320

Author
Panteri, A.; Strehlau, G.; Helbig, R.; Prost, C.; Doucette, K.

Title
Repeated oral dose tolerance in dogs treated concomitantly with ciclosporin and oclacitinib for three weeks.

Source
Veterinary Dermatology; 2016. 27(1):22-e7. 13 ref.

Publisher
Wiley-Blackwell

Location of Publisher
Oxford

Country of Publication
UK

Abstract
Background: Ciclosporin and oclacitinib are immunomodulators approved for the treatment of canine atopic dermatitis. The administration of a short course of prednisolone at the beginning of ciclosporin therapy hastens the efficacy of this drug; oclacitinib has a rapid antipruritic effect similar to that of prednisolone.

Objectives: To evaluate the oral tolerance of oclacitinib and ciclosporin given concurrently for three weeks.

Animals: Two groups of eight beagles. Methods: Dogs were randomized to receive oclacitinib alone (0.4-0.6 mg/kg twice daily for 14 days then once daily for seven days) or in combination with ciclosporin (5 mg/kg once daily) for three weeks. They were examined every day and adverse events were recorded. Blood samples were collected during the acclimatization phase, weekly during treatment and at the end of the study for haematology, clinical chemistry and coagulation evaluation.

Results: There were no abnormal clinical observations following treatment with oclacitinib given alone or concomitantly with ciclosporin, with the exception of diarrhoea in two dogs receiving both drugs. Three dogs from each group experienced transient inappetence; three dogs treated with oclacitinib had mild weight loss. Clinical pathology parameters remained within the reference range for beagle dogs at that facility.

Conclusions and clinical importance: The concomitant administration of ciclosporin and oclacitinib for three weeks to beagles was well tolerated and was not associated with an increase in the number of adverse events or laboratory abnormalities beyond those associated with oclacitinib given alone.

Publication Type
Journal article.
Abstract

Background: Canine atopic dermatitis (CAD) is a chronic dermatological disease partly due to dysregulation of the immune system. Inappropriate activation of CD4+ lymphocytes could favour and promote the allergic response. An inadequate activation system of regulatory T cells (Tregs) is suspected to be a key immunological feature of the allergic response in atopic dogs. Hypothesis/Objectives: To evaluate the difference in the CD4/CD8 lymphocyte ratio and the percentage of Tregs in healthy dogs, in a breed predisposed to CAD, and in dogs affected by CAD before and during therapy with ciclosporin (CsA). Additionally to assess the improvement in pruritus and skin lesions during therapy with CsA, and to compare this with CD4/CD8/Treg values. Animals: Ten atopic dogs of different breed, sex and age, ten healthy dogs and ten English bulldogs were included. Methods: Peripheral blood from all dogs was tested using flow cytometry to assess the CD4/CD8 ratio and percentage of Tregs. For atopic dogs, sampling was repeated after 30 and 90 days of therapy with CsA. Results: The CD4/CD8 ratio was not significantly different between the three groups. The Treg percentage was higher, but not statistically significant, in atopic dogs compared with controls. Therapy with CsA led to clinical improvement; it was not associated with statistically significant differences in haematological variables. Conclusion and clinical importance: This study suggests that Tregs may be involved in the pathogenesis of CAD and that ciclosporin therapy does not affect the circulating lymphocyte subpopulations.

Accession Number
20163000699

Author
Meason-Smith, C.; Diesel, A.; Patterson, A. P.; Older, C. E.; Mansell, J. M.; Suchodolski, J. S.; Hoffmann, A. R.

Title
What is living on your dog's skin? Characterization of the canine cutaneous mycobiotia and fungal dysbiosis in canine allergic dermatitis.

Source
FEMS Microbiology Ecology; 2015. 91(12):fiv139. many ref.

Abstract

To characterize the skin-associated fungal microbiota (mycobiota) in dogs, and to evaluate the influence of body site, individual dog or health status on the distribution of fungi, next-generation sequencing was performed targeting the internal transcribed spacer region. A total of 10 dogs with no history of skin disease were sampled at 10 distinct body sites consisting of haired and mucosal skin, and 8 dogs with diagnosed skin allergies were sampled at six body sites commonly affected by allergic disease. Analysis of similarities revealed that body site was not an influencing factor on membership or structure of fungal communities in healthy skin; however, the mucosal sites were significantly reduced in fungal richness. The mycobiota from body sites in healthy dogs tended to be similar within a dog, which was visualized in principle coordinates.
analysis (PCoA) by clustering of all sites from one dog separate from other dogs. The mycobiota of allergic skin was significantly less rich than that of healthy skin, and all sites sampled clustered by health status in PCoA. Interestingly, the most abundant fungi present on canine skin, across all body sites and health statuses, were Alternaria and Cladosporium-two of the most common fungal allergens in human environmental allergies.

Publication Type
Journal article.

<4>
Accession Number
20153442129
Author
Sindha, M. J.; Trangadia, B. J.; Vihol, P. D.; Parmar, R. S.; Patel, B. V.
Title
Clinicopathological evaluation of non-parasitic dermatoses in canines.
Source
Veterinary World; 2015. 8(11):1346-1350. 27 ref.
Publisher
Veterinary World
Location of Publisher
Rajkot
Country of Publication
India
Abstract
Aim: The present study has been carried out to detect non-parasitic dermatoses in canines brought at the Nandini Veterinary Hospital, Surat. Materials and Methods: The current investigation was carried out on skin scrapping, skin biopsy specimens, blood, and serum samples of 210 freshly registered cases of dogs with dermatological afflictions. Dogs found healthy on clinical examination were used as control animals (n=15). The incidence of non-parasitic dermatoses has been recorded as per age, breed, and sex of dogs. For bacterial isolation, the pus/exudates samples were collected from 40 cases of pyoderma and streaked onto brain-heart infusion agar while 13 skin scrapping samples were inoculated on Sabouraud's dextrose agar with chloramphenicol for isolation of fungi. The organisms were identified on the basis of gross and microscopic observation of cultural growth on media. The blood and sera samples were also collected to note alteration in hematology and biochemical parameters, respectively. Tissue samples from lesions were collected and subsequently preserved in 10% neutral buffered formalin for histopathology. Results: Out of 210 cases of dermatoses, 60 cases were of non-parasitic dermatoses, i.e., 28.57%. Of these, bacterial skin infections (pyoderma) were found to be the predominant at 80.00%, followed by other non-parasitic dermatological disorders, i.e., 11.67% and fungal skin infection, i.e., 8.33%. The dogs belonging to age group 1-3 years showed greater susceptibility to non-parasitic dermatological conditions. Breed wise incidence of pyoderma was found more in the Pomeranian breed (20.83%), whereas fungal skin affections were found to be higher in mongrel breed (60.00% and 42.86%, respectively). Male dogs showed greater involvement in bacterial, fungal, and other non-parasitic dermatoses. Bacteriological culture examination of 40 pus swabs resulted in the growth of 39 bacterial isolates. Mycological culture of skin scrapings from 13 suspected cases of fungal dermatoses resulted in the recovery of five fungal isolates. Hematological and serum biochemical parameters revealed a significant difference in all cases of non-parasitic dermatoses. Histopathological study revealed characteristic changes like infiltration of neutrophils with perifolliculitis, hyperkeratosis, and rafts of acantholytic cells. Histochemical staining revealed purple or magenta color fungal elements. Conclusion: Based on current experiment it has been concluded that among non-parasitic dermatoses bacterial and fungal skin infections are the main ailments, followed by nutritional and other causes in adult and male dogs which can be diagnosed by cultural inoculation, microscopic examination of skin scrapings, and dermatohistopathology along with hematology and biochemistry.

Publication Type
Acute moist dermatitis is a common dermatological condition seen in both the dog and cat. Even though most cases respond quickly and completely to symptomatic therapy, it is still important to assess each animal on an individual basis and undertake a few quick basic diagnostic tests on each one in order to prescribe the most appropriate therapy.

There are many different treatment options for atopic dermatitis in the dog and cat. Unfortunately, many of the recommendations for therapy are based on anecdotal reports rather than on evidence-based decisions. This review considers the different treatment modalities that may be considered, together with the supporting scientific data for each of them. Therapies that are discussed include antihistamines, glucocorticoids, ciclosporine, Janus kinase inhibitors and allergen-specific immunotherapy.
Accession Number
20153431479
Author
Werner, A.
Title
All in the family: chronic dermatitis & German shorthaired pointers.
Source
NAV Clinician's Brief; 2015. (November):18-22. 8 ref.
Publisher
Educational Concepts LLC
Location of Publisher
Tulsa
Country of Publication
USA
Publication Type
Journal article.

Accession Number
20153420886
Author
Curtis, C. F.
Title
Case report: an ‘atypical’ atopic.
Source
Companion Animal; 2014. 19(4):204-211. 3 ref.
Publisher
MA Healthcare Limited
Location of Publisher
London
Country of Publication
UK
Abstract
A 20-month-old, neutered female Labrador was presented for dermatology referral with a history suggestive of a cutaneous hypersensitivity disorder. Following a series of investigative tests, she was diagnosed with atopic dermatitis but despite therapy with antihistamines, immunotherapy, cyclosporine and glucocorticoids, the dog continued to be pruritic and ultimately started to show signs of iatrogenic hyperglucocorticoidism. The recent launch of the antipruritic drug oclacitinib may provide a further alternative option for maintenance treatment in such a case, and the dog's early response to this novel therapy is discussed.
Publication Type
Journal article.
<9>
Accession Number
20153403393
Author
Noli, C.; Valle, M. F. della; Miolo, A.; Medori, C.; Schievano, C.
Title
Efficacy of ultra-micronized palmitoylethanolamide in canine atopic dermatitis: an open-label multi-centre study.
Source
Veterinary Dermatology; 2015. 26(6):e101. 54 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Background: Palmitoylethanolamide is a naturally occurring bioactive lipid, produced on-demand by damage-exposed cells. Palmitoylethanolamide is documented to counteract inflammation, itch and pain.
Objective: The aim of this 8-week study was to evaluate the efficacy of oral ultra-micronized palmitoylethanolamide (PEA-um) in dogs with moderate atopic dermatitis. Animals: Clinicians from 39 veterinary clinics enrolled 160 dogs with nonseasonal atopic dermatitis and moderate pruritus. Methods: This was a multi-centre open-label study. On days 0 (D0) and 56 (D56), owners evaluated pruritus with a Visual Analog Scale (VAS) and completed a validated Quality of Life (QoL) questionnaire. Veterinarians assessed the severity of skin lesions using the Canine Atopic Dermatitis Lesion Index (CADLI). Results: Mean pruritus VAS score decreased from 5.7+or-0.08 cm (range 3.8-7.9 cm) to 3.63+or-0.19 cm (range 0.1-9.2 cm) (P<0.0001). At D56, 58% of dogs showed a greater than 2 cm reduction from baseline and 30% showed an absent-to-very mild pruritus (VAS <=2 cm). Mean total CADLI at D56 decreased significantly (P<0.0001); in 62% of dogs this score reached a value in the remission range (<=5). Mean total QoL score was significantly decreased (P<0.0001) with 45% of dogs reaching QoL values described for healthy animals. Tolerability was good-to-excellent with only four dogs reporting treatment associated reversible adverse events. Conclusions and clinical importance: PEA-um appears to be effective and safe in reducing pruritus and skin lesions, and in improving QoL in dogs with moderate atopic dermatitis and moderate pruritus.
Publication Type
Journal article.

<10>
Accession Number
20153403390
Author
Fisara, P.; Shipstone, M.; Berky, A. von; Berky, J. von
Title
A small-scale open-label study of the treatment of canine flea allergy dermatitis with fluralaner.
Source
Veterinary Dermatology; 2015. 26(6):e98. 12 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract

[Information about the study on flea allergy dermatitis is not provided in the given text.]
Background: Fluralaner is an isoxazoline systemic insecticide and acaricide that provides persistent flea-killing activity on dogs for 12 weeks. European and US field studies have shown that fluralaner treatment alleviates the signs of flea allergy dermatitis (FAD) in client-owned dogs. Hypothesis/Objective: To assess the clinical response in FAD affected dogs over the 12-week period following a single oral fluralaner treatment. Animals: Twenty client-owned dogs were diagnosed with FAD on the basis of compatible clinical signs and a positive response in flea antigen tests, using intradermal and or serological methods. Methods: An open-label small-scale study with all dogs receiving a single oral fluralaner treatment. All enrolled dogs were diagnosed with FAD and then clinically monitored at 4-week intervals for 12 weeks. Twenty dogs completed the study. Results: All dogs were flea-free at all post-treatment assessments except for one dog that had a single flea at the first post-enrollment assessment at 4 weeks. At the 4-week post-treatment assessment active FAD signs had resolved in all dogs; at 8 weeks post-treatment, two dogs showed mild signs. All clinical signs of FAD had resolved at the final assessment of 12 weeks after treatment. Conclusions and clinical importance: A single administration of fluralaner alleviated or resolved signs associated with FAD in all treated dogs over the recommended 12-week treatment period.

Publication Type
Journal article.

Accession Number
20153321554

Author
Hutt, J. H. C.; Dunn, K. A.; Scase, T. J.; Shipstone, M. A.

Title
A preliminary survey of the histopathological features of skin from the planum nasale and adjacent skin of dogs unaffected by dermatological or respiratory disease.

Source
Veterinary Dermatology; 2015. 26(5):e79. 7 ref.

Publisher
Wiley-Blackwell

Location of Publisher
Oxford

Country of Publication
UK

Abstract
Background: There is a general belief that immune system cells are present in larger numbers in the planum nasale and adjacent haired skin than in other locations in the dog. However, little published information about the normal histological appearance of the skin of this area exists. Hypothesis/Objectives: The aim was to obtain information about the normal histological appearance of canine skin for specific anatomical regions of the planum nasale and the haired skin adjacent to the planum nasale. Animals: Samples from three sites were obtained from the planum nasale and adjacent haired skin of 25 dogs of varying age, breed and sex, with no evidence of dermatological or respiratory disease. Methods: Samples were analysed to determine and quantify the immune system cells present in the samples. Slides were stained with haematoxylin and eosin or toluidine blue; immunohistochemical stains for CD3 and CD79a were applied. Results: Immune system cells, including lymphocytes and plasma cells, were either very rare or present in low numbers. The majority of lymphocytes were of T-cell origin, with only infrequent B cells identified. Samples contained numerous melanophages, consistent with pigmentary incontinence, regardless of the presence or absence of inflammatory cells. Mast cells and plasma cells were present in low numbers. Conclusions: Inflammatory change noted in diagnostic biopsies from this area from dogs with clinical disease is likely to be of pathological significance. However, pigmentary incontinence appears to be common at this site in clinically normal dogs without significant inflammatory cell infiltration and is therefore not necessarily of pathological significance when seen in isolation in this location.

Publication Type
Journal article.

<12>
Accession Number
20153321552
Author
Ohshima-Terada, Y.; Higuchi, Y.; Kumagai, T.; Hagihara, A.; Nagata, M.
Title
Complementary effect of oral administration of Lactobacillus paracasei K71 on canine atopic dermatitis.
Source
Veterinary Dermatology; 2015. 26(5):e75. 17 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Background: Atopic dermatitis is a common skin disease encountered in dogs. Glucocorticoids are commonly recommended for symptomatic therapy and well-tolerated adjunctive therapies may help to reduce the necessary dose and associated risks of chronic glucocorticoid use. Hypothesis/Objectives: The purpose of this study was to evaluate the complementary efficacy of oral administration of Lactobacillus paracasei K71 in canine atopic dermatitis (cAD). Animals: Forty one dogs with mild to moderate cAD were recruited by 19 animal hospitals. Methods: Dogs were assigned to receive either the investigational agent (K71 group; n=20) or cetirizine hydrochloride (control group; n=21). Previously prescribed medications were allowed to be continued during the 12 week trial. Dogs were assessed by the investigators using the cAD Extent and Severity Index (CADESI) and a medication scoring system. Pet owners assessed their dogs using a visual analog scale (VAS) and pruritus scores. Results: The CADESI scores, VAS and pruritus scores in both groups at 12 weeks were improved compared with their baselines. The CADESI and pruritus scores in the K71 group were slightly lower than those in the control group and the reduction of medication scores in the K71 group was significantly lower compared with the control group (P<0.05; Student's t-test). Conclusions and clinical importance: Oral administration of K71 can be useful in dogs with cAD as a complementary therapy, by providing a steroid-sparing effect.
Publication Type
Journal article.

<13>
Accession Number
20153306598
Author
Olivry, T.; DeBoer, D. J.; Favrot, C.; Jackson, H. A.; Mueller, R. S.; Nuttall, T.; Prelaud, P.
Title
Treatment of canine atopic dermatitis: 2015 updated guidelines from the International Committee on Allergic Diseases of Animals (ICADA).
Source
BMC Veterinary Research; 2015. 11(210);(16 August 2015). 64 ref.
Publisher
BioMed Central Ltd
Background: In 2010, the International Task Force on Canine Atopic Dermatitis (now International Committee on Allergic Diseases of Animals, ICADA) published the first consensus guidelines for the treatment of atopic dermatitis (AD) in dogs. This is the first 5-year minor update of this document. Results: The treatment of acute flares of AD should involve the search for, and then elimination of, the cause of the flares, bathing with mild shampoos, and controlling pruritus and skin lesions with interventions that include topical and/or oral glucocorticoids or oclacitinib. For chronic canine AD, the first steps in management are the identification and avoidance of flare factors, as well as ensuring that there is adequate skin and coat hygiene and care; this might include more frequent bathing and possibly increasing essential fatty acid intake. The medications currently most effective in reducing chronic pruritus and skin lesions are topical and oral glucocorticoids, oral ciclosporin, oral oclacitinib, and, where available, injectable recombinant interferons. Allergen-specific immunotherapy and proactive intermittent topical glucocorticoid applications are the only interventions likely to prevent or delay the recurrence of flares of AD. Conclusions: This first 5-year minor update of the international consensus guidelines for treatment of AD in dogs further establishes that the treatment of this disease is multifaceted, and that interventions should be combined for a proven (or likely) optimal benefit. Importantly, treatment plans are likely to vary between dogs and, for the same dog, between times when the disease is at different stages.

Author
Hensel, P.; Santoro, D.; Favrot, C.; Hill, P.; Griffin, C.

Title
Canine atopic dermatitis: detailed guidelines for diagnosis and allergen identification.

Source
BMC Veterinary Research; 2015. 11(196):(11 August 2015). 81 ref.
of canine AD is based on meeting clinical criteria and ruling out other possible causes with similar clinical signs. Flea combing, skin scraping and cytology should be performed, where necessary, as part of a thorough work-up. Elimination diet trials are required for patients with perennial pruritus and/or concurrent gastrointestinal signs. Once a clinical diagnosis of canine AD is made, allergy testing can be performed to identify potential causative allergens for allergen-specific immunotherapy.

Publication Type
Journal article.

<15>
Accession Number
20153273148
Author
Maina, E.; Noli, C.
Title
Perianal pruritus in the dog.
Source
Veterinary Focus; 2015. 25(2):36-41. 25 ref.
Publisher
Royal Canin Ltd (UK and Ireland)
Location of Publisher
Castle Cary
Country of Publication
UK
Abstract
This article discusses the aetiological factors; diagnostic work-up and current medical treatments of perianal pruritus in dogs. Perianal pruritus is most often linked to anal sac diseases or allergic dermatitis, and diagnosis requires a methodical approach, as successful identification and treatment of the underlying cause is essential in order to effect a cure.
Publication Type
Journal article.

<16>
Accession Number
20153273146
Author
Saito, E. K.; Rhoads, C.
Title
Prevalence of canine atopy.
Source
Veterinary Focus; 2015. 25(2):26-28. 5 ref.
Publisher
Royal Canin Ltd (UK and Ireland)
Location of Publisher
Castle Cary
Country of Publication
UK
Abstract
This article discusses the prevalence of atopy in dogs seen at a network of primary US veterinary hospitals between 2009 and 2013. It is suggested that the annual prevalence of atopic dogs slowly increased from 2.4% in 2009 to 2.8% in 2013. The highest prevalence is observed during spring and summer months, while West Highland White Terrier had the highest prevalence of affected breed.

Publication Type
Journal article.
Atopic dermatitis (AD) is a chronic, relapsing skin disease characterised by intense pruritus, alopecia and hyperpigmentation. AD poses a massive physical, emotional and economic burden, and yet still little is known about the mechanism of this complex (multifactorial) disease. Much is needed to be understood before attempting to successfully manage atopic patients, from the causative agents to the economic impact on clients. It is hoped more comprehensive understanding of the mechanism of AD will allow more research into different treatment approaches and possibly lead to curative treatment. This article discusses the causes and significance of the disease, diagnosis, public health impact and, most importantly, the mechanism of AD and treatment options.
Accession Number 20153133511
Author
Title
Review: lymphocytes, cytokines, chemokines and the T-helper 1-T-helper 2 balance in canine atopic dermatitis.
Source
Veterinary Dermatology; 2015. 26(2):e32. 64 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Background: The development of atopic dermatitis (AD) and other cutaneous hypersensitivities involves the activation and differentiation of allergen-specific lymphocytes. Although hypersensitivity is often considered to be a 'T-helper 2-polarized' lymphocyte response, recent evidence suggests that clinical disease is associated with the development of multiple lymphocyte phenotypes. Objectives: The purpose of this paper is to review recent advances in the understanding of the roles of lymphocytes, cytokines and noncytokine factors in the pathogenesis of canine AD. Methods: Citation databases, abstracts and proceedings from international meetings published between 2001 and 2013 were reviewed in this update. Where necessary, older articles were included for background information. Results: The development of canine AD is associated with changes in both cutaneous and circulating lymphocyte populations. These lymphocyte responses are characterized by the production of a complex variety of cytokines, including not only T-helper 2 but also T-helper 1, T-helper 17 and regulatory T-cell responses. In addition, microarray gene expression analysis has enabled the identification of a number of noncytokine factors that appear to be associated with atopic inflammation. These include the calcium-binding protein S100A8, serum amyloid A and a number of protease inhibitors, as well as genes involved in epidermal barrier formation, innate immunity receptors, cell cycle proteins and apoptosis. Conclusions: The development of AD in dogs is characterized by the development of a delicate balance between a variety of T-cell phenotypes and inflammatory mediators, including cytokines, chemokines and noncytokine factors.
Publication Type
Journal article.

Accession Number 20153133510
Author
Pucheu-Haston, C. M.; Bizikova, P.; Eisenschenk, M. N. C.; Santoro, D.; Nuttall, T.; Marsella, R.
Title
Review: the role of antibodies, autoantigens and food allergens in canine atopic dermatitis.
Source
Veterinary Dermatology; 2015. 26(2):e30. 122 ref.
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
Abstract

Background: Canine atopic dermatitis (AD) is considered to be an immunoglobulin E (IgE)-mediated hypersensitivity response to environmental allergens. The role of other antibody isotypes and nonenvironmental allergens in disease pathogenesis remains unclear. Objectives: The objective of this review is to provide an update on advances in the understanding of the relevance of specific antibody isotypes, autoallergens and nonenvironmental allergens in the pathogenesis of canine AD. Methods: Citation databases, abstracts and proceedings from international meetings published between 2001 and 2013 were reviewed. Where necessary, older articles were included for background information. Results: Neither total nor allergen-specific IgE necessarily correlates with clinical disease in canine AD. Some dogs exhibit clinical signs that are indistinguishable from AD but have no demonstrable allergen-specific IgE (atopic-like dermatitis). Allergen-specific immunoglobulin G may be demonstrated in canine AD, but there is no evidence that this isotype plays a role in disease development. Although humans with AD may develop serum IgE against autoallergens, this finding has not been substantiated in the dog. In contrast, adverse food reactions are frequently co-associated with AD in the dog. Ingestion of food and environmental allergens may trigger exacerbations of AD. Conclusions and clinical importance: Determination of the role of IgE in the pathogenesis of canine AD still requires clarification. Clinical trials and research studies must distinguish atopic dogs with allergen-specific IgE or skin test reactivity from those without. There is no convincing evidence demonstrating a pathogenic role for either allergen-specific immunoglobulin G or autoallergens in canine AD, but food items may be triggers for disease flares in certain individuals.
presentation. However, a lack of fully controlled studies precludes definitive interpretation of these data. Conclusions and clinical importance: Evidence indicates that the cells and noncellular components of the innate immune system and the epidermis may play critical roles during both the sensitization and the effector phases of canine AD. Derangements in lipid metabolism may be involved in the pathogenesis of AD in dogs, but additional controlled studies are required in this area.

Publication Type
Journal article.

Background: Canine atopic dermatitis (AD) is a common, genetically predisposed, inflammatory and pruritic skin disease. The pathogenesis of canine AD is incompletely understood. Objectives: The aim of this review is to provide an in-depth update on the involvement of skin barrier and host-microbiome interaction in the pathogenesis of canine AD. Methods: Online citation databases and abstracts from international meetings were searched for publications related to skin barrier and host-microbiome interaction (e.g. bacteria, yeast, antimicrobial peptides). Results: A total of 126 publications were identified. This review article focuses on epidermal barrier dysfunction and the interaction between cutaneous microbes (bacteria and yeasts) and the host (antimicrobial peptides). Epidemiological updates on the presence of pathogenic organisms and canine AD are also provided. Conclusions and clinical importance: Major advances have been made in the investigation of skin barrier dysfunction in canine AD, although many questions still remain. Skin barrier dysfunction and host-microbiome interactions are emerging as primary alterations in canine AD. Based on this review, it is clear that future studies focused on the development of drugs able to restore the skin barrier and increase the natural defences against pathogenic organisms are needed.

Title: Review: clinical and histological manifestations of canine atopic dermatitis.

Background: Many studies focusing on clinical and histological signs of canine atopic dermatitis (AD) have been published since its early descriptions decades ago. Findings of these studies contributed to our current knowledge about the disease pathogenesis and allowed establishment of diagnostic criteria used by clinicians and researchers. Objectives: This review serves as an update on the clinical and histological features of canine AD published by the American College of Veterinary Dermatology Task Force on Canine Atopic Dermatitis in 2001 and summarizes the recent discoveries in these fields. Results: The overall findings of studies focusing on clinical features mirrored those published by the Task Force in 2001. The
novelty was the larger number of animals included in these studies, which allowed establishment of a new set of diagnostic criteria that exceeded the sensitivity and specificity of the previous criteria. The same study uncovered some clinical differences between dogs with food-induced and nonfood-induced AD; however, the authors concluded that these two entities cannot be distinguished based on clinical signs only. Another study demonstrated some major breed-specific phenotypes. Several publications addressed the histological features of canine AD skin lesions in experimental models of AD, but none of those addressed naturally occurring lesions. Nevertheless, the histopathological description of the skin reactions was generally similar to that published by the Task Force in 2001. Conclusions: Considerable work has been done in recent years to provide a better definition of the clinical appearance and histopathology of canine AD. New sets of diagnostic criteria have been developed, and additional breed-associated differences in phenotypes have been demonstrated.

Publication Type
Journal article.

<27>
Accession Number
20153075221
Author
Jackson, H.
Title
Canine atopic dermatitis and adverse food reactions.
Source
Publisher
British Small Animal Veterinary Association
Location of Publisher
Quedgeley
Country of Publication
UK
Publication Type
Journal article.

<28>
Accession Number
20153088636
Author
Navarro, C.; Crastes, N.; Benizeau, E.; McGahie, D.
Title
Voluntary acceptance and consumption of two oral ciclosporin formulations in dogs: two randomised, controlled studies.
Source
Publisher
BioMed Central Ltd
Location of Publisher
London
Country of Publication
UK
Abstract
Background: Atopic dermatitis (AD) is the most common canine allergic skin disease and can significantly affect the quality of life of affected dogs. Treating canine AD with ciclosporin has been a subject of great interest in recent years. Many studies have provided substantial evidence of ciclosporin efficacy and safety in canine AD management, and for several years ciclosporin has been recognised as a major component of canine AD multimodal therapy. As a chronic condition, canine AD requires life-long medical management and treatment success relies in large part on product ease of administration. Two studies were conducted to assess the comparative voluntary acceptance and consumption of CyclavanceReg. (Virbac), a new oral liquid formulation of ciclosporin, and AtopicaReg. (Novartis) either added to a small quantity of kibbles (study 1) or administered directly into the dog's mouth (study 2). Results: Over the course of the two studies 70 dogs assessed each of the ciclosporin formulations and 320 individual tests were performed for each tested product. Immediate prehension (in less than 2 seconds) occurred significantly more often with CyclavanceReg. (90.6% of the tests) than with AtopicaReg. (14.4% of the tests) when products were mixed with 30 grams of dry food (p<0.001). Moreover, CyclavanceReg. was significantly more often easily accepted than AtopicaReg. (99.3% vs 27.1% of the tests, respectively) when products were administered directly into the dogs' mouth (p<0.0001). CyclavanceReg. was also more often totally consumed (98.3% of the tests) than AtopicaReg. (2.2% of the tests) when mixed with a small amount of food (p<0.001). However, both products were totally consumed once administered directly into the dogs' mouth. Conclusions: By facilitating ciclosporin administration and consumption, CyclavanceReg. liquid formulation offers an interesting alternative to capsules that may improve dosing compliance and therefore the ability to benefit from the therapeutic effects in the long-term treatment of canine AD.
Publication Type
Journal article.

Accession Number
20153087164
Author
Little, P. R.; King, V. L.; Davis, K. R.; Cosgrove, S. B.; Stegemann, M. R.
Title
A blinded, randomized clinical trial comparing the efficacy and safety of oclacitinib and ciclosporin for the control of atopic dermatitis in client-owned dogs.
Source
Publisher
Wiley-Blackwell
Location of Publisher
Oxford
Country of Publication
UK
Abstract
Background: Ciclosporin is approved for the treatment of atopic dermatitis (AD) in dogs and has been shown to be safe and effective. Placebo-controlled studies suggest that oclacitinib is a safe and effective alternative therapy. Hypothesis/Objectives: To evaluate the efficacy and safety of oclacitinib, in comparison to ciclosporin, for the control of AD in a blinded, randomized clinical trial, incorporating a noninferiority test at day 28. Animals: A total of 226 client-owned dogs with a history of AD from eight sites were enrolled. Methods: Enrolled animals were randomized to receive oral oclacitinib (0.4-0.6 mg/kg twice daily for 14 days, then once daily) or oral ciclosporin (3.2-6.6 mg/kg once daily) for 12 weeks. Owners assessed pruritus using an enhanced visual analog scale (VAS), and veterinarians assessed dermatitis using the Canine Atopic Dermatitis Extent and Severity Index (CADESI)-02. Results: On days 1, 2, 7, 14, 28, 56 and 84, the percentage reduction from baseline for owner-assessed pruritus changed from 25.6 to 61.0% in the oclacitinib group compared with 6.5 to 61.5% in the ciclosporin group; differences were significant at all time
points up to day 28. On day 56, ciclosporin-treated dogs showed a similar decrease in pruritus to oclacitinib-treated dogs. On day 14, the percentage reduction from baseline CADESI-02 was significantly greater in the oclacitinib group (58.7%) than in the ciclosporin group (43.0%). Three times as many adverse events attributed to gastrointestinal signs were reported in the ciclosporin group compared with the oclacitinib group.

Conclusions and clinical importance: In this study of treatment for canine AD, oclacitinib had a faster onset of action and a lower frequency of gastrointestinal side effects compared with ciclosporin.

Publication Type
Journal article.
Breed dependent clinical aspects in canine atopic dermatitis.

Lucrari Stiintifice - Medicina Veterinara, Universitatea de Stiinte Agricole si Medicina Veterinara "Ion Ionescu de la Brad" Iasi; 2014. 57(1/2):266-271. 9 ref.

Universitatea de Stiinte Agricole si Medicina Veterinara "Ion Ionescu de la Brad" Iasi

Abstract

Canine atopic dermatitis is an allergic condition with genetic background and primarily dermatological manifestations represented by pruritus, eritema, papulae and secondary lesions due to an abnormally increased IgE production consequent to sensibilization towards airborne allergens. The aim of this study was to find correlations between the literature data and the clinical cases of canine atopic dermatitis registered at the Faculty of Veterinary Medicine Iasi, between 1 October 2012 - 1 May 2014, regarding breed site predispositions of the skin lesions, with special interest in West Highland White Terriers, Labrador Retrievers and German Shepherds. Generalized pruritus was found in all dogs, erythema and alopecia in the typical sites: axillae and abdomena but in GS and LR there was a preference for the inguinal region and a diffuse alopecia was found on the distal parts of the paws. In LR periorbital alopecia and erythema of the pinnae was more often than in other breeds. In GS, a constant finding were the numerous papulae diffusely localized on the dorso-lumbar area and the involvement of the ventral side of the neck. In WHWT a special aspect was represented by the intense hyperpigmentation and parakeratosis on all ventral parts of the body, along with bacterial and fungal infection. Otitis externa was also found especially in GS and WHWT. The specific site predispositions of different dog breeds in atopic dermatitis can facilitate the clinical examination and treatment approach in order to assure a favorable evolution of the disease, without further unconsidered complications.

Journal article.

Clinical efficacy of low-level laser therapy on localized canine atopic dermatitis severity score and localized pruritic visual analog score in pedal pruritus due to canine atopic dermatitis.

Veterinary Dermatology; 2014. 25(5):464-e74. 50 ref.

Background: Canine atopic dermatitis is a genetically predisposed inflammatory skin disease often requiring multimodal treatment. There is a need to find further low-risk adjunctive therapies. Hypothesis/Objectives To evaluate the localized effect of low-level laser therapy (LLLT) on the paws of dogs with atopic dermatitis using a localized canine atopic dermatitis severity score (LCADSS) and owner localized pruritic visual analog
score (LPVAS) in comparison to treatment with a placebo. Animals Thirty client-owned dogs with symmetrical pedal pruritus due to canine atopic dermatitis. Methods: Dogs were randomly assigned into two groups. In each group, one paw was treated with LLLT and one paw treated with a placebo laser (comparing either both fore- or hindpaws). Treatments were administered at 4 J/cm² (area from carpus/tarsus to distal aspect of digit 3) three times per week for the first 2 weeks and two times per week for the second 2 weeks. Scores were assessed for each paw at weeks 0, 2, 4 and 5. Results: There were no significant differences in LCADSS or LPVAS between LLLT and placebo treatments between weeks 0 and 5 (P = 0.0856 and 0.5017, respectively). However, LCADSS and LPVAS significantly decreased from week 0 at weeks 2, 4 and 5 in both LLLT and placebo groups (P < 0.0001 for all). Conclusions and clinical importance: Low-level laser therapy is not an effective localized treatment for pedal pruritus in canine atopic dermatitis.

Publication Type:
Journal article.

<33>
Accession Number
20143302783
Author
Meadows, C.; Guerino, F.; Sun, F. S.
Title
A randomized, blinded, controlled USA field study to assess the use of fluralaner tablets in controlling canine flea infestations.
Source
Parasites and Vectors; 2014. 7(375):(16 August 2014). 15 ref.
Publisher
BioMed Central Ltd
Location of Publisher
London
Country of Publication
UK
Abstract
Background: The novel isoxazoline molecule fluralaner provides 12 weeks activity against fleas and 8 to 12 weeks against tick infestations according to label claims. Methods: This blinded, multi-center study in client-owned dogs evaluated the flea control provided by a single oral fluralaner treatment (25-56 mg/kg; BravectoTM, Merck Animal Health) compared to a control group administered three oral spinosad (30-60 mg/kg; ComfortisReg., Elanco) treatments at 4-week intervals together with an amitraz collar (9%, PreventicReg., Virbac). Households were randomized (3:1 ratio) to either fluralaner (224 dogs, 118 households) or control (70 dogs, 39 households). Within households, one primary dog with at least 10 live fleas at enrollment was randomly selected for whole body flea counts every 4 weeks through Week 12; all dogs were followed for safety until Week 12. Fluralaner dogs received two additional doses at Weeks 12 and 24 for further safety and palatability observations through Week 26. Results: Geometric mean flea count reductions from baseline for the fluralaner group at Weeks 4, 8, and 12 were 99.7%, 99.8%, and 99.8%, respectively; and 96.1%, 99.5%, and 99.6% for the spinosad controls. Percentages of flea-free primary dogs at Weeks 4, 8, and 12 were 91.1%, 95.4%, and 95.3% for the fluralaner group; and 44.7%, 88.2%, and 84.4% for the controls; the differences were significant at Weeks 4 (P < 0.0001) and 12 (P = 0.0370). Improvements in veterinarian assessed flea allergy dermatitis (FAD) were observed in both groups. Fluralaner tablets were accepted free choice in over 90% of doses. The most common adverse event was vomiting, occurring in 7.1% of the fluralaner group and 14.3% of the controls. No treatment related serious adverse events were reported. Conclusions: A single treatment of dogs with the palatable fluralaner flavored chewable tablet provides a safe and effective option for 12 weeks of flea control at least equivalent to that of 3 sequential treatments with spinosad tablets. Linked to the high level of flea control was a substantial alleviation of associated signs of FAD.

Publication Type
Efficacy and safety of rush immunotherapy with alum-precipitated allergens in canine atopic dermatitis.

Objectives: Canine atopic dermatitis is a very common disease in small animal practice. Its only specific treatment is allergen immunotherapy. In rush immunotherapy (RIT) increasing doses of allergen extract are injected subcutaneously in short intervals. Maintenance doses are achieved within one day compared to weeks or months with conventional immunotherapy. The aim of this study was to evaluate the safety and efficacy of RIT with alum-precipitated allergens. Materials and methods: A series of 20 dogs with atopic dermatitis underwent RIT with alum-precipitated allergens. Pruritus and medications at the start of the immunotherapy and 12 months afterwards were compared and adverse effects were recorded. Results: Significant improvement in pruritus (p=0.0001) and medication scores (p=0.0004) was noted after approximately 12 months of treatment. The observed clinical response was good to excellent in 70% of the dogs, consistent with other published reports. One dog vomited once during the induction day, with no other clinical problems and completion of the normal protocol. The other 19 dogs showed no adverse effects at all during or after RIT. Conclusion and clinical relevance: RIT with alum-precipitated allergens seems to be a safe and efficacious method to treat dogs with atopic dermatitis.
UK

Abstract
This article discusses the ulcerative necrotizing dermatitis and pododermatitis due to infection of the food pads and mentum by Staphylococcus pseudintermedius as the cause of neonatal mortality in puppies. The postmortem examinations, bacterial culture, clinical aspects, histopathology and lesions of S. pseudintermedius in affected puppies are highlighted.

Publication Type
Journal article.

<36>
Accession Number
20143144971

Author
Olivry, T.; Saridomichelakis, M.; Nuttall, T.; Bensignor, E.; Griffin, C. E.; Hill, P. B.

Title
Validation of the Canine Atopic Dermatitis Extent and Severity Index (CADESI)-4, a simplified severity scale for assessing skin lesions of atopic dermatitis in dogs.

Source
Veterinary Dermatology; 2014. 25(2):77-e25. 13 ref.

Publisher
Wiley-Blackwell

Location of Publisher
Oxford

Country of Publication
UK

Abstract
Background: Severity scales are used to grade skin lesions in clinical trials for treatment of dogs with atopic dermatitis (AD). At this time, only two scales have been validated, namely the Canine Atopic Dermatitis Extent and Severity Index (CADESI)-3 and the Canine Atopic Dermatitis Lesion Index (CADLI). However, the high number of assessed sites makes the CADESI-3 impractical. Hypothesis/Objectives: The aim of this study was to develop and validate a fourth version of the CADESI that is simpler and quicker to administer.

Methods: Body sites, lesions and severity grades were revised by members of the International Committee on Allergic Diseases of Animals (ICADA). The newly designed CADESI-4 was tested for its validity (i.e. content, construct and criterion), reliability (i.e. inter- and intra-observer reliability and internal consistency), responsiveness (i.e. sensitivity to change) and time to administer. Disease severity benchmarks were chosen using receiver operating characteristic methodology. Results: The CADESI-4 was simplified in comparison to its previous version to comprise 20 body sites typically affected in atopic dogs. Three lesions (erythema, lichenification and alopecia/excoriation) were scored from 0 to 3 at each site. The CADESI-4 had satisfactory validity, reliability and sensitivity to change. On average, the time to administer a CADESI-4 was one-third that of a CADESI-3. Proposed benchmarks for mild, moderate and severe AD skin lesions are 10, 35 and 60, respectively. Conclusions and clinical importance: The CADESI-4 is simpler to use and quicker to administer than its previous version. The ICADA recommends the CADESI-4 instead of the CADESI-3 to score skin lesions of AD in dogs enrolled in clinical trials.

Publication Type
Journal article.

<37>
Accession Number
Hypothyroidism associated skin and coat abnormalities in dogs - a study of 49 patients. (Special Issue: Veterinary dermatology.)

Abstract
Hypothyroidism with signs of dermatitis was diagnosed in 49 dogs of various breed, age and sex based on thyroid profile. The classical skin and coat manifestations include bilateral alopecia, rat tail appearance, puppy like coat, dry and lustreless coat, alopecia at neck, bald thigh appearance, hyperpigmentation, failure of hair regrowth and delayed wound healing. Few affected cases revealed Malassezia pachydermatis, Demodex canis and Staphylococcus spp. and hence diagnosed for malasseziosis, demodicosis and bacterial pyoderma, that were secondary to hypothyroidism. The animals were successfully managed with Levothyroxine and other specific drugs without any recurrence.
respectively). Additionally, more dogs improved by at least 50% in CADESI-03 and pruritus scores in the
treatment group than in the placebo group (P=0.008 and P=0.070, respectively). No adverse reactions were
observed. The topical preparation containing PUFAs and essential oils was a safe treatment and beneficial in
ameliorating the clinical signs of CAD.

Publication Type
Journal article.

Accession Number
20133420343
Author
Shaw, S.
Title
A therapeutic approach to allergic pruritus in the dog. (Supplement Issue: Companion animal dermatology.)
Source
In Practice; 2013. 35(Supplement):24-28. 29 ref.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK
Abstract
Allergic skin disease is a common and frustrating problem in dogs with a wide variety of differential
diagnoses that must be excluded if appropriate treatment is to be implemented. There is a broad spectrum of
possible clinical signs in allergic skin disease and the combination of these signs dictates the most
appropriate treatment needed. This article discusses the agents available for treatment of canine atopic
dermatitis.
Publication Type
Journal article.

Accession Number
20133420339
Author
Sousa, C. A.
Title
Diagnostic approach to the itchy dog. (Supplement Issue: Companion animal dermatology.)
Source
In Practice; 2013. 35(Supplement):2-6. 13 ref.
Publisher
BMJ Publishing Group
Location of Publisher
London
Country of Publication
UK
Abstract
In practice, it can be challenging to obtain a diagnosis for the pruritic dog. Without a diagnosis it is difficult to provide the pet owner with information about the cause, the prognosis or even the appropriate treatments. This can create frustration for both the pet owner and veterinary surgeon and leads to increased chronic disease in affected dogs. The aim of this article is to provide some guidelines that will help a veterinary surgeon proceed from the first presentation of an itchy dog to a diagnosis. It also discusses the common pruritic skin diseases of the dog and how to think about and approach the diagnosis.

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**Publication Type**
Journal article.

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**<41>**
Accession Number  
20133374893  
Author  
Eichenseer, M.; Johansen, C.; Mueller, R. S.  
Title  
Efficacy of dimetinden and hydroxyzine/chlorpheniramine in atopic dogs: a randomised, controlled, double-blinded trial.  
Source  
Veterinary Record; 2013. 173(17):423.  
Publisher  
BMJ Publishing Group  
Location of Publisher  
London  
Country of Publication  
UK  
Abstract  
Antihistaminic drugs are commonly used as symptomatic therapy of atopic dermatitis in dogs. Unfortunately, their clinical benefit is largely unsubstantiated. In a double-blinded, placebo-controlled, cross-over trial, the influence of dimetinden and of a combination of chlorpheniramine and hydroxyzine on pruritus and lesions was evaluated in 19 dogs. They were treated with either product or a placebo orally for 14 days, each time followed by a 14-day washout period. Before and after each period, the dogs were examined and the Canine Atopic Dermatitis Extent and Severity Index (CADESI) determined by a clinician, and the pruritus and general condition by the owner. Dimetinden improved the pruritus significantly (P=0.014) but not the CADESI (P=0.087), the combination of hydroxyzine and chlorpheniramine improved the CADESI (P=0.049) and pruritus (P=0.05) significantly. Ten of 17 dogs improved by more than 25 per cent in pruritus with the combination of hydroxyzine and chlorpheniramine, 12 of 18 with dimetindenmaleate and only 2 of 19 with placebo. Antihistamines can help to reduce pruritus in atopic dogs, but in most cases, the improvement is limited and additional treatment may be needed.  
Publication Type  
Journal article.

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**<42>**
Accession Number  
20133384458  
Author  
Reeder, C.  
Title  
Dermatologic markers of internal disease in dogs & cats.
Abstract
This article discusses the common dermatological signs, diagnosis and treatment of some common and uncommon internal skin diseases in dogs and cats such as: hypothyroidism, hyperadrenocorticism, calcinosis cutis, alopecia associated with follicular arrest, primary hypoparathyroidism, acquired skin fragility syndrome, paraneoplastic disease and hepatocutaneous syndrome.