

The usefulness of short-course prednisolone during the initial phase of an elimination diet trial in dogs with food-induced atopic dermatitis

Claude Favrot^{*†1} , Petra Bizikova^{†1}, Nina Fischer^{*} , Ana Rostaher^{*}  and Thierry Olivry[†] 

^{*}Dermatology Unit, Clinical for Small Animal Internal Medicine, Vetsuisse Faculty, University of Zurich, Winterthurerstrasse 260, 8057 Zurich, Switzerland

[†]Department of Clinical Sciences, College of Veterinary Medicine, North Carolina State University, 1060 William Moore Drive, Raleigh, NC 27607, USA

Correspondence: Claude Favrot, Dermatology Unit, Clinical for Small Animal Internal Medicine, Vetsuisse Faculty, University of Zurich, Winterthurerstrasse 260, 8057 Zurich, Switzerland. E-mail: cfavrot@vetclinics.uzh.ch

Background – Food allergy is a possible cause of atopic dermatitis (AD) in dogs; it is typically diagnosed following an eight-week elimination diet trial (EDT) and a provocation with the original diet. This lengthy procedure is difficult for owners and its interpretation may be unclear.

Hypothesis/Objectives – To test the effect of prednisolone used in the first weeks of an EDT in order to reduce the total time period for diagnosis. The goal was to perform food challenges earlier than after the traditionally recommended eight weeks.

Animals – Fifty-three dogs with AD were included in the study.

Methods and materials – All dogs were fed a commercially available extensively hydrolyzed protein-based commercial pet food and treated with prednisolone for at least two weeks to control pruritus and inflammation. Dogs were challenged two weeks after prednisolone finished, provided that no flare had occurred. Dogs with relapsing signs were fed the hydrolyzate for at least eight weeks with or without further prednisolone treatment.

Results – Ten of 53 dogs (19%) had no relapse after two weeks off prednisolone: they were subsequently challenged with their regular food, had a relapse of signs and were diagnosed with a food-induced AD within four to six weeks of starting the EDT. In the other dogs, signs remained uncontrolled without prednisolone or relapsed rapidly after its discontinuation: they were considered nonfood-allergic after an eight week EDT.

Conclusion and clinical importance – This study demonstrates that a shorter EDT is possible if the allergic pruritus and inflammation are initially controlled with a short course of glucocorticoids. This shortened trial is likely to improve owner adherence and facilitate the diagnosis of food allergy.

Introduction

Cutaneous adverse food reactions (CAFRs) are a common cause of skin diseases in dogs, even though the prevalence varies greatly depending upon the population.¹ The pathogenesis of canine CAFRs currently is believed to involve both nonimmunological (i.e. food intolerances) and immunological (i.e. food allergies) processes, the latter being either IgE- and/or cell-mediated.² Food-induced atopic dermatitis (FIAD) is the denomination currently proposed for one of the manifestations of food allergies in which food allergens trigger a flare of a pruritic skin disease that is clinically characteristic of atopic dermatitis (AD).³ The diagnosis of FIAD and other

CAFRs is based on a long eight to 10 week elimination dietary trial (EDT).⁴ An evidence-based review suggested that an eight week EDT is needed to diagnose CAFR in >90% of dogs;⁵ eight weeks is frequently recommended for an EDT.⁵ Although the persistence of food allergens in the animal's body in quantities sufficient to elicit clinical signs for up to two months would be difficult to explain immunologically, the chronicity of skin changes and self-perpetuating cutaneous inflammation seen in some dogs with chronic FIAD offers a logical rationale for the need of such a lengthy period before achieving a noticeable improvement.

The interpretation of an EDT is based on the observation of an improvement in skin lesions and pruritus during the restrictive phase of this trial. To confirm the diagnosis, this EDT should be followed by recurrence of signs following a challenge with the original diet.^{6,7} An important limitation in this is that dog owners are responsible for observing and reporting the signs of a positive challenge. Although, in an experimental study involving research dogs with spontaneous food allergy, most dogs with IgE-mediated food allergy exhibited a flare of signs within 48 h after provocation with individual food items,⁸ the

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currently recommended length of food challenges, up to two weeks, originates from a study in which a single dog exhibited a relapse of signs two weeks after starting the provocation.⁷ Of note is that such a duration before the recurrence of signs would be hardly reconcilable with either immunoglobulin E (IgE)-mediated or lymphocyte-mediated mechanisms.

The interpretation of EDTs can be affected by several factors leading to false-positive or false-negative test results. Among the factors leading to false-positive results during lengthy EDT are the increasingly high amounts of essential fatty acids in most commercial diets used for EDT and the possible natural seasonal variations in the types and amounts of airborne allergens during the two to three month long trials. By contrast, factors leading to false-negative outcomes in truly food-allergic dogs are the development of bacterial or yeast skin infections, changes in environmental allergen load, the more than common lack of compliance with the veterinarian's recommendations of a strict EDT or the presence of yet unknown food allergen cross-reactivities. Additionally, the presence of undeclared sources of proteins and the difficulty of getting an accurate food history also could contribute to misinterpretations of the result of such trial.

Herein, the practicality and usefulness of a shorter duration EDT to diagnose canine food allergy is explored. With this proposed design, oral prednisolone was systematically yet transiently administered during the first (restrictive) stage of the EDT to rapidly alleviate skin inflammation and enable the performance of food challenges earlier than after the traditionally recommended eight weeks.

Methods and materials

Animals

The aim was to include ≥ 50 client-owned dogs with nonseasonal AD, using the assumption that between 10% and 50% of those (median 30%) would end up with the diagnosis of FIAD.¹ All dogs were examined as part of a normal clinical investigation for skin allergy. Amongst these dogs, a selection was made of those that met all of the following criteria: (i) a diagnosis of nonseasonal AD using standard diagnostic criteria;⁹ (ii) a score ≥ 3 on the 10 grade Pruritus Visual Analog Scale (PVAS10);¹⁰ (iii) an ongoing unflavoured treatment against fleas; (iv) lack of evidence of active superficial or deep pyoderma and/or yeast dermatitis, assessed by cytological examination; (v) a detailed food history during the month preceding selection for this trial; and (vi) $\geq 50\%$ of the dog's diet being in the form of kibble.

Dogs receiving topical or oral glucocorticoids, ciclosporin or oclacitinib were not enrolled unless these treatments were discontinued. The withdrawal times for glucocorticoids and ciclosporin followed recommendations made for allergen tests.¹¹ Even though withdrawal times for intradermal tests (IDT) and food challenges are not intuitively comparable, it was considered that they both involved, at least in part, an IgE-mediated flare, thereby justifying the use of similar drug withdrawal times. For oclacitinib, there was no withdrawal period due to the very short half-life of this drug. Dogs receiving allergen-specific immunotherapy were not allowed to be entered into the study. Topical antibacterial treatments were accepted provided that the protocols of such treatments remained unchanged throughout the study.

Pruritus assessment

Pruritus severity was rated by the owners daily using the PVAS10.¹⁰ The obtained data were submitted to the investigator weekly. In

addition, the owners were asked to grade their dogs using a subjective disease activity form that included three grades and descriptors: (1) "The disease of my dog is well controlled", (2) "The disease of my dog is not totally controlled but I do not consider that its quality of life is impaired. I do not think that it is necessary to change the treatment or visit the doctor" and (3) "The disease of my dog is not at all controlled. The quality of life of my dog is impaired. It is necessary to change the treatment and/or to visit the doctor".

Restrictive phase of the elimination dietary trial

In order to standardize the EDT, all dogs were fed an extensively hydrolyzed poultry feather and corn starch diet (Anallergenic/Ultamino, Royal Canin; Aimargues, France) and owners were instructed not to give any other foods or treats. Flavoured oral medications were not permitted during the EDT.

Elimination diet trial protocol

In order to increase the probability of detection of a mild pruritus flare after challenge with a culprit food, the aim was to perform such challenges in a dog with reduced pruritus. As a result, a decision was made to treat all dogs with prednisolone at 0.5 mg/kg twice daily for three days followed by 0.5 mg/kg once daily until the PVAS10 reached ≤ 2 , the upper limit reported for a normal dog's itch.¹⁰ Once the PVAS10 values had reached this level, dogs were continued on the same prednisolone regimen for at least one more week before its discontinuation. The minimum required length of prednisolone administration was two weeks. During this period, the PVAS10 value had to remain ≤ 2 and the subjective disease activity assessment score had to remain at 1.

Two weeks off prednisolone was required before initiating the food challenges. Only dogs that maintained daily PVAS10 values of ≤ 2 and subjective disease activity scores of 1 during this time period proceeded to the challenge phase.

Dogs showing signs of a flare of pruritus (a subjective disease activity score of 3 or a PVAS10 > 2 ; whichever came first) during the two week period off prednisolone continued the EDT and could receive additional course(s) of prednisolone at the discretion of the clinician. Prednisolone had to be discontinued in all dogs by Week 7 of the EDT. These repeated prednisolone treatments were not required in dogs in which the pruritus level was compatible with an acceptable quality of life. Altogether, the maximum length of the EDT to identify dogs with FIAD was eight weeks.⁵ Dogs in which the PVAS10 remained > 2 during this period and which did not reach level 1 status on the subjective disease activity scale after eight weeks were concluded to be nonfood-allergic and were returned to their original diet. This study protocol is summarized in Figure 1.

Challenges

All recruited dogs underwent sequential food challenges, which were done with the commercial dog foods that the dog ate during the last two weeks preceding the initiation of the EDT. The transition was gradual during the first three days (mixing 50% of the Anallergenic/Ultamino with the originally given foods).

This challenge lasted for two weeks, but it was stopped if the owners noticed a relapse of pruritus (i.e. a subjective disease activity score level of 3 or if the dogs' PVAS10 value was > 5 , whichever came first). In such cases, the dogs' diet was switched back to the Anallergenic/Ultamino diet until the PVAS10 value was ≤ 2 and the subjective disease activity score was 1. The diagnosis of FIAD was made if the dog's signs improved during the EDT, remained controlled during the two weeks off prednisolone therapy, relapsed during the food challenge with the dog's original food items and improved spontaneously after the elimination diet re-introduction.

Results

Animals

Fifty-three dogs with AD met the inclusion criteria. The female:male ratio was 0.8 (24/29) and the breeds most

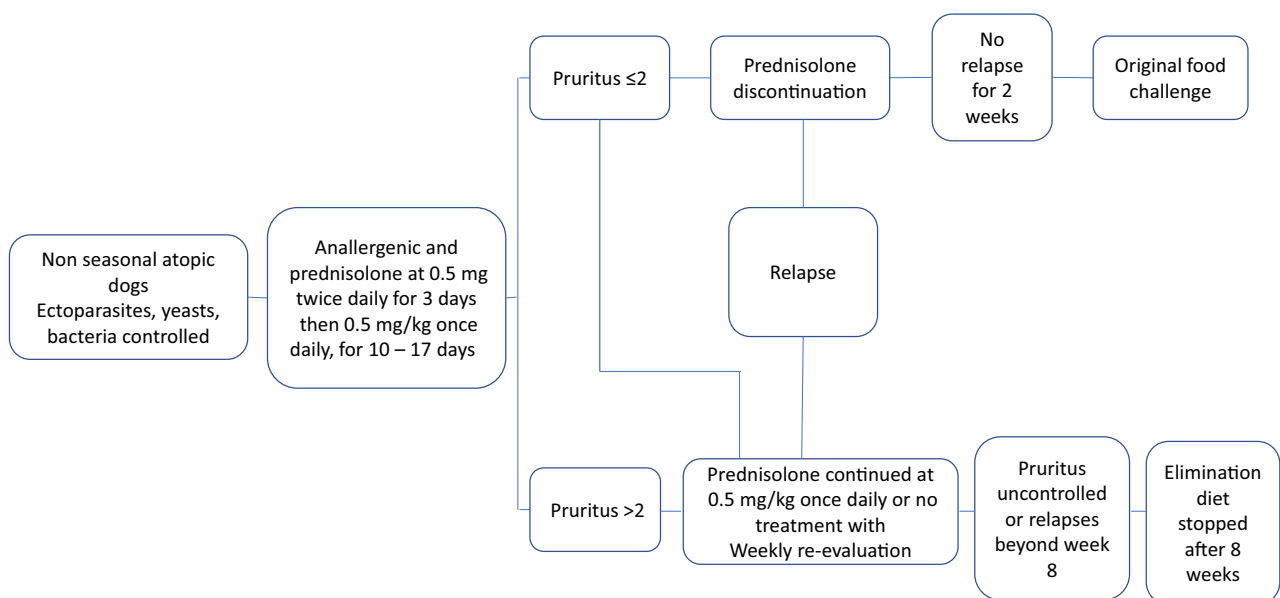


Figure 1. Summary of the study protocol.

often represented were Labrador retrievers (eight dogs), French bulldogs (six) and West Highland white terriers (five); the median age at inclusion was three years (range: 1–10 years). The median pruritus score at the time of starting the EDT was 6 (range: 3–10). Details on the enrolled subjects can be found in Table S1.

Elimination diet trial

Per protocol, all dogs received at least one course of prednisolone during the initial phase of EDT, which lasted a median of 14 days (range: 12–30 days; Table 1). After this first prednisolone treatment phase, the pruritus was controlled in all dogs (i.e. $PVAS_{10} \leq 2$). Eight of these 53 dogs (15%) did not exhibit a flare of pruritus during the subsequent two weeks without receiving prednisolone.

In the other 45 dogs (85%), the median time to flare up was eight days (range: 1–13 days; Table 1). Among these, there were 12 of 45 dogs (27%) that remained on the Anallergenic/Ultamino diet for the entire eight week period of the EDT without ever reaching normal pruritus levels. The other 33 of 45 dogs (73%) received one or two additional short courses of prednisolone and 31 had a flare of signs when this glucocorticoid was discontinued. By contrast, pruritus scores remained at normal levels during the two weeks following the withdrawal of

prednisolone in two dogs; in these, the duration of the EDT was 43 and 44 days.

Altogether, 10 of 53 dogs (19%) met the proposed criteria to be challenged with their original diet. These 10 dogs exhibited a flare of AD after such provocation and clinical signs subsequently improved after reintroducing the Anallergenic/Ultamino; these dogs were thus diagnosed as having a FIAD (Tables S2–S4); their median time to flare after starting the food challenge was three days (range: 1–10 days). In these food-allergic dogs, the median duration of the EDT was 28 days (range: 28–44 days).

The other 43 of 53 dogs (81%) underwent a longer EDT [median: 60 days (range: 54–70 days); Tables S2–S4] without ever being assessed as having pruritus levels of normal dogs off the prednisolone. In these dogs, clinical signs did not worsen after reintroduction of the former diet and the diagnosis of nonfood-induced AD was therefore given.

Discussion

The failure to identify canine food allergies, whatever their manifestations, often results from poor owner adherence in maintaining the strictness of the recommended, yet lengthy, eight to 10 week long EDT.⁵ The present study

Table 1. Summary of the study findings for dogs with food-induced and nonfood-induced atopic dermatitis (AD)

	Food-induced atopic dermatitis AD	Nonfood-induced AD
Number of dogs	10	43
Age [years; median (range)]	3 (1–7)	4 (1–10)
Sex (male:female ratio)	3:7 = 0.4	26:17 = 1.5
Pruritus score at the time of the 1st course of prednisolone	6.1	6.3
Duration of the 1st course of prednisolone [days; median (range)]	14 (14–21)	14 (12–30)
Number (%) of dogs having a flare of pruritus after the first prednisolone course	2 (20%)	43 (100%)
Time-to-flare of pruritus after stopping the induction course of prednisolone [days; median (range)]	7 (7–8)	10 (1–13)
Total duration of the elimination/provocation dietary trial [days; median (range)]	28 (28–44)	60 (54–70)
Time-to-flare of pruritus after the original food provocation [days; median (range)]	3 (1–10)	NA

tested the hypothesis that a shorter EDT could still successfully identify dogs with FIAD if a short course of prednisolone were added during the initial EDT phase to dampen any existing itch and inflammatory pathways, and their resulting clinical signs. Indeed, one of the likely explanations for the need of a lengthy EDT is a self-perpetuating inflammation that is no longer involving a continuous allergen contact. A shorter EDT would have many advantages, not only improving the owners' compliance to the EDT, but it also would reduce flares due to skin infections that occur secondarily to the underlying allergic inflammation.

In this study, a standard anti-inflammatory dosage of prednisolone reduced pruritus manifestation levels to those expected for normal dogs (i.e. PVAS $10 \leq 2$) in all 53 enrolled dogs within a two to four week period (median: 14 days). Such rapid pruritus reduction allowed us to begin the confirmatory food challenge in six of 10 dogs with FIAD (60%) as early as the fourth week of the EDT; in the remaining four dogs (40%), this was done by the sixth week. Altogether, this approach resulted in a reduction of the EDT duration by two to four weeks. One should keep in mind, however, that some dogs with chronic skin changes and/or concurrent skin infections might require a longer duration of prednisolone administration to reach the pruritus level of a normal dog. However, some dogs undergoing a classical EDT might have signs that respond very rapidly after the diet change even without prednisolone; the lack of a control group in the present study did not permit the identification of such dogs.

It is important to note that two dogs with FIAD had signs that relapsed after receiving the initial two weeks of prednisolone. This would suggest that, despite their clinical improvement, these dogs still had a pronounced skin inflammation explaining the subsequent rapid relapse after glucocorticoid discontinuation. In the future, it would be interesting to assess whether a longer initial treatment (three weeks or longer), could reduce the number of dogs with FIAD with signs relapsing after the initial prednisolone treatment. If verified, such an approach would permit a better and faster differentiation between dogs with or without FIAD.

In the present study, the median duration of EDT in dogs without food allergy was almost nine weeks (60 days). As some studies have suggested that EDTs be carried on for ≤ 12 weeks to diagnose the rare dogs with food allergies, one could hypothesize that the shorter EDT duration used herein would miss some cases of FIAD.⁷ However, this possibility is considered unlikely because, by contrast to the original studies in which dogs did not receive any anti-inflammatory treatment to speed up the resolution of the inflammation and related chronic skin changes to achieve a "return to normal status", the dogs herein received anti-inflammatory dosages of prednisolone, some for more than one course, to achieve this status in a more rapid manner.

The Anallergenic/Ultamino commercial pet food is used in food trials as reactions to this food are considered likely to be very rare because ten chicken-allergic dogs were shown to not react to this diet.¹² It cannot be excluded, however, that some cases with a FIAD caused by non

IgE-mediated mechanisms (e.g. a lymphocyte-mediated reaction) or an allergy to corn starch proteins might have been missed.¹³ Indeed, in one study, four of 12 dogs with chicken and/or corn allergy (33%) were shown to have a positive challenge to this hydrolyzed diet.¹⁴

All ten dogs in which pruritus score remained ≤ 2 during the two week period off steroids were subsequently challenged. In all of them, the itch relapsed within one to 10 days of starting the food challenge, a range similar to those described previously.⁷ Considering the possible pathomechanisms involved in such flares, it is likely, at least theoretically, that relapses of signs that occur within the first days of challenge are immediate reactions involving IgE and mast cells, whereas those occurring after one week would involve lymphocyte-mediated mechanisms.

It also is important to remember that these results might not have been achieved with other anti-pruritic treatments, which do not possess such rapid or broad anti-inflammatory effects as glucocorticoids. Therefore, this shortened EDT protocol and its expected outcomes cannot be directly transposed to other anti-allergic drugs that have either a broad yet slow onset of action (e.g. ciclosporin) or a rapid yet narrower spectrum of action (e.g. oclacitinib or lokivetmab).¹⁵

In summary, the present study demonstrates that a short elimination diet is possible if the allergic itch and inflammation are initially controlled with glucocorticoids. In fact, the use of glucocorticoid in the initial phase of the trial has been mentioned in some earlier studies,^{16,17} but a prospective trial had never been reported before, to the best of the author's knowledge. It is suggested that the EDT be started concurrently with an anti-inflammatory dosage of prednisolone given, at least, during the first two weeks of the trial and, if needed, to re-treat all dogs that relapse within the subsequent two week period with a second course of prednisolone. This procedure requires a close contact with the owners to assess whether prednisolone therapy could be discontinued, whether the dogs are exhibiting a flare or not, and to eventually decide when to challenge with the original diet to ultimately confirm the diagnosis of food allergy. The results of this small scale study that enrolled dogs with AD and led to the diagnosis of FIAD in 10 of them should be validated in pruritic patients with other manifestations of food allergies.

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Supporting Information

Additional Supporting Information may be found in the online version of this article.

Table S1. Details of the dogs included in the study.

Table S2. Results for all dogs.

Table S3. Results for dogs with food-induced atopic dermatitis.

Table S4. Results for dogs diagnosed with nonfood-induced atopic dermatitis.

Résumé

Contexte – L’allergie alimentaire est une cause possible de dermatite atopique (AD) chez le chien; elle est usuellement diagnostiquée à la suite d’un régime d’éviction de huit semaines (EDT) et une provocation avec l’aliment initial. Cette procédure longue est difficile pour les propriétaires et son interprétation peut être douteuse.

Hypothèses/Objectifs – Tester l’effet de la prednisolone utilisée au cours des premières semaines d’EDT afin de réduire le temps total pour le diagnostic. Le but était de réaliser des provocations alimentaires plus précoces qu’après les huit semaines traditionnellement recommandées.

Sujets – Cinquante trois chiens avec AD ont été inclus dans l’étude.

Matériels et méthodes – Tous les chiens ont été nourris avec une alimentation industrielle constituée de protéines hydrolysées et ont reçu de la prednisolone au moins deux semaines pour contrôler le prurit et l’inflammation. Les chiens ont été provoqués deux semaines après l’arrêt de la prednisolone à condition qu’aucune poussée n’ait eu lieu. Les chiens avec des signes de récurrence ont ensuite été nourris avec l’hydrolysate pendant au moins huit semaines avec ou sans prednisolone associée.

Résultats – Dix des 53 chiens (19%) n’ont pas présenté de rechute après deux semaines de prednisolone : ils ont été ensuite provoqués avec leur nourriture habituelle, ont présentés des signes de récurrence et diagnostiqués avec une AD liée à l’alimentation dans les quatre à six semaines d’EDT. Les autres chiens (ayant les signes non contrôlés sans prednisolone ou récidivant rapidement après l’arrêt) ont été considérés comme allergiques non liés à l’alimentation après huit semaines d’EDT.

Conclusion et importance clinique – Cette étude montre qu’un EDT plus complet est possible si le prurit et l’inflammation allergiques sont initialement contrôlés par une courte période de corticoïdes. Cet essai plus court permet d’augmenter l’adhésion des propriétaires et de faciliter le diagnostic d’allergie alimentaire.

Resumen

Introducción – la alergia alimentaria es una posible causa de dermatitis atópica (AD) en perros; por lo general, se diagnostica después de una prueba con dieta de eliminación de ocho semanas (EDT) y una provocación con la dieta original. Este largo procedimiento es difícil para los propietarios y su interpretación puede ser poco clara.

Hipótesis/objetivos – evaluar el efecto de la prednisolona utilizada en las primeras semanas de un EDT para reducir el período de tiempo total para el diagnóstico. El objetivo era realizar reexposición alimentaria antes de las ocho semanas recomendadas tradicionalmente.

Animales – se incluyeron en el estudio cincuenta y tres perros con AD.

Métodos y materiales – todos los perros fueron alimentados con un alimento comercial para mascotas a base de proteínas hidrolizadas disponible comercialmente y tratados con prednisolona durante al menos dos semanas para controlar el prurito y la inflamación. Los perros fueron reexpuestos dos semanas

después de terminar el tratamiento con prednisolona, siempre que no se hubiera producido un recaída. Los perros con signos recurrentes fueron alimentados con dieta hidrolizada durante al menos ocho semanas con o sin tratamiento adicional con prednisolona.

Resultados – Diez de 53 perros (19%) no tuvieron recaídas después de dos semanas sin prednisolona: posteriormente fueron reexpuestos a su alimentación regular, manifestando de nuevos los signos clínicos y fueron diagnosticados con una EA inducida por alimentos entre cuatro y seis semanas tras comenzar la prueba EDT. En los otros perros, los signos permanecieron incontrolados sin prednisolona o recayeron rápidamente después de su interrupción: se consideraron no alérgicos a los alimentos después de una EDT de ocho semanas.

Conclusión e importancia clínica

este estudio demuestra que una EDT más corta – es posible si el prurito alérgico y la inflamación se controlan inicialmente con un ciclo corto de glucocorticoides. Es probable que esta prueba más corta mejore el cumplimiento por partes de los propietarios y facilite el diagnóstico de alergia alimentaria.

Zusammenfassung

Hintergrund – Eine Futtermittelallergie ist eine mögliche Ursache für die atopische Dermatitis (AD) bei Hunden; sie wird üblicherweise nach einer acht-wöchigen Eliminationsdiät (EDT) und einer Provokation mit dem ursprünglichen Futter diagnostiziert. Diese langwierige Prozedur ist für die BesitzerInnen schwierig und die Interpretation unklar.

Hypothese/Ziele – Ein Austesten der Wirksamkeit von Prednisolon, welches in den ersten Wochen einer EDT angewendet wurde, um die Gesamtzeit bis zur Diagnose zu vermindern. Das Ziel war eine frühere Durchführung einer Futterprovokation als nach den traditionell empfohlenen acht Wochen.

Tiere – Dreiundfünfzig Hunde mit AD wurden in die Studie aufgenommen.

Methoden und Materialien – Alle Hunde wurden mit einem kommerziell erhältlichen intensiv hydrolysiertem Protein-basierten kommerziellem Hundefutter gefüttert und für mindestens zwei Wochen mit Prednisolon behandelt, um den Juckreiz und die Entzündung zu kontrollieren. Die Provokation wurde an den Hunden zwei Wochen nach Absetzen des Prednisolons durchgeführt, vorausgesetzt, dass kein Rückfall erfolgt war. Wenn bei Hunden ein Rückfall auftrat, wurde das Hydrolysat für mindestens acht Wochen mit oder ohne weitere Prednisolon Verabreichung gefüttert.

Ergebnisse – Zehn von 53 Hunden (19%) zeigten nach zwei Wochen ohne Prednisolon keinen Rückfall: sie wurden in der Folge mit ihrem regulären Futter provoziert, zeigten ein Wiederauftreten der Symptome und wurden mit einer Futter-induzierten AD innerhalb von vier bis sechs Wochen nach Start der EDT diagnostiziert. Bei den anderen Hunden blieben die Symptome ohne Prednisolon unkontrolliert oder zeigten ein rasches Wiederauftreten nachdem es abgesetzt worden war: sie wurden nach einer acht-wöchigen EDT als nicht-futtermittelallergisch diagnostiziert.

Schlussfolgerung und klinische Bedeutung – Diese Studie zeigt, dass eine kürzere EDT möglich ist, wenn der anfängliche allergische Juckreiz und die Entzündung mit einer kurzen Gabe von Glucokortikoiden kontrolliert werden. Diese verkürzte Versuchszeit wird es den BesitzerInnen leichter machen konsequent zu bleiben und die Diagnose einer Futtermittelallergie ermöglichen.

要約

背景 – 食物アレルギーは、犬アトピー性皮膚炎(AD)の原因の一つである可能性がある。通常、8週間の除去食試験(EDT)および元の食餌による負荷試験によって診断される。この長い手順はオーナーにとって困難であり、その解釈は不明瞭な可能性がある。

仮説/目的 – 本研究の目的は、診断までの合計期間を短縮するために、EDTの最初の数週間に使用されるプレドニゾロンの効果をテストすることであった。目標は、伝統的に推奨された8週間後よりも早く食物負荷試験を実施することであった。

被験動物 – AD犬53頭を本研究に包含した。

材料と方法 – すべての犬に市販の広範囲な加水分解タンパクベースの市販ペットフードを与え、痒痒および炎症コントロールのために少なくとも2週間プレドニゾロンで治療した。紅斑が生じていなければ、プレドニゾロン終了2週間後に犬に負荷試験を実施した。再燃徴候のある犬には少なくとも8週間加水分解食を与え、さらにプレドニゾロン治療を実施、または中止した。

結果 – 53頭中10頭(19%)は、プレドニゾロン2週間使用後に再発しなかった。その後、通常の食餌によって負荷試験を実施し、兆候の再燃を認め、EDT開始から4~6週間以内に食物誘発性ADと診断した。他の犬においては、プレドニゾロンなしでは兆候を制御できないままであるか、中止後に急速に再燃した。8週間のEDT後、非食物性アレルギーとみなした。

結論と臨床的重要性 – 本研究は、アレルギー性痒痒および炎症を短期間のグルココルチコイド治療によって初期にコントロールした場合、より短いEDTが可能であることを示している。この短縮試験は、オーナーの順守を改善し、食物アレルギーの診断を容易にする可能性がある。

摘要

背景 – 食物過敏可能是犬异位性皮炎(AD)的原因;通常需要8周食物排查试验(EDT),并随后用原来的日粮激

发才能确诊。对于宠主而言,过程冗长难以坚持,对结果的判读也不明确。

假设/目的 — 开始EDT的前几周使用泼尼松龙,检测是否能缩短诊断时间。旨在传统推荐的八周之前完成食物激发。

动物 — 53只AD患犬入选本研究项目。

方法和材料 — 所有犬均饲喂市售的、蛋白质充分水解的宠物商业粮,同时用泼尼松龙治疗至少两周,以控制瘙痒和炎症。泼尼松龙两周后停药,只要未发生急性症状,就对犬进行食物激发。给有复发病状的犬饲喂水解粮至少八周,继续或停止泼尼松龙治疗。

结果 — 泼尼松龙两周停用后,53只犬有10只(19%)没有复发:他们用原来食物激发后症状复发,并在EDT4-6周后被诊断为食物诱发的AD。在另一组犬身上,没有服用泼尼松龙则症状无法控制,或停药后症状迅速复发;EDT8周后这些犬被诊断为非食物过敏。

结论和临床价意义 — 本研究表明,如果短期糖皮质激素能初步控制过敏性瘙痒和炎症,则可以缩短EDT的时间。短期的食物试验使宠主更容易坚持,有助于食物过敏的诊断。

Resumo

Contexto — A alergia alimentar é uma causa possível de dermatite atópica (DA) em cães e é mais comumente diagnosticada após oito semanas de dieta de eliminação (DE) e desafio com a dieta original. Este longo processo é difícil para os proprietários e sua interpretação pode ser confusa.

Hipótese/Objetivos — Testar o efeito da prednisolona utilizada nas primeiras semanas de DE para redução o tempo total para o diagnóstico. O objetivo foi realizar desafios alimentares antes das oito semanas tradicionalmente recomendadas.

Animais — Cinquenta e três cães com DA foram incluídos no estudo.

Métodos e materiais — Todos os cães foram alimentados com uma dieta comercial à base de proteína extensivamente hidrolisada e tratados com prednisolona por ao menos duas semanas para controlar o prurido e a inflamação. Os cães foram submetidos ao desafio duas semanas após o fim da prednisolona, desde que nenhuma crise tivesse ocorrido. Cães com recidiva de sinais clínicos foram alimentados com a dieta hidrolisada por ao menos oito semanas com ou sem tratamento adicional com prednisolona.

Resultados — Dez dos 53 cães (19%) não apresentaram recidiva após duas semanas sem prednisolona: eles foram subsequentemente desafiados com a ração anterior, apresentaram recidiva dos sinais clínicos e foram diagnosticados com dermatite atópica induzida por alimentos em quatro a seis semanas após o início da DE. Nos outros cães, os sinais clínicos se mantiveram descontrolados sem prednisolona recidivaram rapidamente após descontinuação: eles foram considerados não alérgicos a alimentos após DE de oito semanas.

Conclusão e importância clínica — Este estudo demonstra que uma DE mais curta é possível se o prurido alérgico e a inflamação forem inicialmente controlados com um curto período de glicocorticoides. É provável que esta dieta de eliminação mais curta melhore a adesão dos proprietários e facilite o diagnóstico de alergia alimentar.

Supporting Information

Table S1. Study population

Dog	Breed	Gender	Age in year
1	Golden Retriever	F	2
2	Dogo Argentino	FC	4
3	West-Highland-white Terrier	FC	1
4	Continental Bulldog	M	3
5	French Bulldog	FC	2
6	French Bulldog	M	1
7	Boxer	M	1
8	Labrador Retriever	MC	3
9	Dalmatian	MC	1
10	Pug	M	4
11	Labrador Retriever	M	2
12	German Shepherd	M	6
13	Labrador Retriever	FC	6
14	Mastin Espanol	FC	1
15	West-Highland-white Terrier	F	2
16	Mongrel	FC	10
17	French Bulldog	F	1
18	American Bulldog	M	4
19	Mongrel	MC	3
20	Thibetan Terrier	M	4
21	French Bulldog	FC	1
22	German shepherd	MC	5
23	Mongrel	MC	8
24	Thibetan Terrier	MC	4
25	Mastin Espanol	FC	4
26	Golden Retriever	MC	7
27	English Bulldog	MC	3
28	Labrador Retriever	FC	8
29	Mongrel	MC	3
30	West-Highland-white Terrier	M	1
31	West-Highland-white Terrier	MC	1
32	West-Highland-white Terrier	FC	1
33	Dandie Dinmont Terrier	MC	9
34	French Bulldog	F	3
35	Bullterrier	M	4

Supporting Information

S2. Detailed results; All dogs

[illegible]

Supporting Information

S3. Detailed results. FIAD dogs																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Dog number	Pruritus score at the time of the 1st course of prednisolone			Duration of the 1st course of prednisolone (days)			Pruritus score at the end of the 1st prednisolone course			Time-to-flare of pruritus after stopping the induction course of prednisolone (days)			Pruritus score at the time of flare			Pruritus score 2 weeks after prednisolone discontinuation if no flare			Pruritus score at the time of initiation of the 2nd course of prednisolone			Duration of the 2nd course of prednisolone to return to a PVAS10 < 2 (days)			Time-to-flare of pruritus after stopping the 2nd course of prednisolone (days)			Pruritus score 2 weeks after the 2nd prednisolone discontinuation if no flare			Pruritus score at the time of initiation of the 3rd course of prednisolone			Duration of the 3rd course of prednisolone to return to a PVAS10 < 2 (days)			Pruritus score at the end of the elimination diet			Time-to-flare of pruritus after the original food provocation (days)			Total duration of the elimination/provocation dietary trial (days)			Final diagnosis																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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