

## ATOPIC DERMATITIS IN A MALE SHIH TZU DOG

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### Abstract

Atopic dermatitis in dogs is a chronic skin condition caused by allergies to environmental allergens such as pollen and dust mites. Symptoms include itching, inflammation and skin lesions. Diagnosis is based on clinical symptoms and exclusion of other diseases. Treatment includes environmental control measures, drug baths, immunomodulatory therapy and use of anti-inflammatory drugs. Prevention is done through appropriate environmental and food management. In this article, a case of atopic dermatitis will be reported in a male Shih Tzu dog treated at the Veterinary Hospital of the University of West São Paulo (UNOESTE), highlighting the importance of complementary exams and that dermatitis can be caused by certain natural foods. Also emphasizing the importance of effective therapy and proper assessment of clinical signs, enabling effective treatment significantly improving the quality of life of the animal, without, however, preventing the use of natural food.

**Key words:** atopy; allergen; skin lesions.

## DERMATITE ATÓPICA EM CÃO MACHO DA RAÇA SHITZU

### Resumo

A dermatite atópica em cães é uma doença de pele crônica causada por alergias a alérgenos ambientais, como pólen e ácaros. Os sintomas incluem coceira, inflamação e lesões cutâneas. O diagnóstico é baseado em sintomas clínicos e exclusão de outras doenças. O tratamento inclui medidas de controle ambiental, banhos medicamentosos, terapia imunomoduladora e uso de medicamentos anti-inflamatórios. A prevenção é feita por meio de manejo ambiental e alimentar adequados. Neste estudo será relatado um caso de dermatite atópica em cão macho da raça Shih Tzu atendido no hospital veterinário da Universidade do Oeste Paulista (UNOESTE), destacando a importância dos exames complementares e que a dermatite pode ser ocasionada por determinados alimentos naturais. Ressaltando também a importância de uma terapia efetiva e adequada avaliação

dos sinais clínicos, possibilitando um tratamento eficaz melhorando de forma significativa a qualidade de vida do animal, sem, no entanto, impedir a utilização da alimentação natural.

**Palavras-chave:** alérgeno; atopia; lesões cutâneas.

## 1. Introduction

The skin is the largest organ of the body and it determines shapes, gives characteristics to races, and maintains the hair covering (Alves *et al.*, 2020). Dermatopathy designates a set of diseases that directly affect the skin and are caused by various factors, such as ectoparasitosis, infectious infections, neoplasms, autoimmune diseases, allergies, among others (Lima, 2019) Dermatopathies represent 30 to 75% of cases in small animal clinics (Feitosa, 2020).

These diseases are characterized by inflammation of the skin due to repetition turning into a chronic condition, with the presence of itching (Seglin; Queiroz, 2022).

The most observed clinical sign is the presence of itching between the groin, nose, and toes. It also affects the ears and armpits due to excessive scratching, causing lesions. Redness and thickening of the skin can also be observed, as well as alopecia (Shultz; Andreoni, 2017). Atopic dermatitis is a pruritic dermatopathy associated with nonspecific inflammatory lesions and is considered one of the most common skin problems in clinical practice (Morailon *et al.*, 2013). Atopy is manifested by a predisposition to allergy to various substances (Rhodes, 2011).

The therapeutic approach takes into account several factors, such as seasonality, distribution and quantity of affected skin, in addition to the severity of the lesion and stage of the disease, the patient's conditions, and can be topical or systemic, with a multimodal focus that includes the use of antipruritic medications, allergen-specific immunotherapy and drugs that cause restructuring of the skin barrier and its microbiota (Sanabri; Ribeiro; Ribeiro, 2022).

This article will report a case of atopic dermatitis treated at the Veterinary Hospital of the University of Western São Paulo (UNOESTE) in 2023, demonstrating the importance of diagnostic tests for differential diagnosis and the development of effective therapy.

## 2. Case Report

The first contact with the animal was necessary at a private veterinary clinic, where it was attended to by the professor in charge of the dermatology department at the university. Since the university veterinary hospital was closed, and it was an urgent case, the initial consultation took place at this clinic.

Subsequently, the animal was referred for treatment at the Veterinary Hospital of the University of Western São Paulo (UNOESTE). On February 10, 2023, a six year old male Shih Tzu weighing 5.75 kilograms presented with a complaint of itching for the past three months.

The patient had a history of recurrent otitis. During the anamnesis, it was noted that the animal frequently chewed its paws and licked the nipple region. The patient was exclusively fed homemade food, and the owner reported regular ectoparasite control.

On physical examination, erythematous regions were identified (Figure 1), along with honey-colored crusts and pustules in the areas where the patient experienced itching. No fleas or ticks were found on the patient.

Erythema and the presence of cerumen (Figure 2) were identified in the auricular pavilions. The parameters of heart rate, respiratory rate, and temperature were within normal range.

**Figure 1.** Erythematous regions.



**Source.** Elaboration of the authors.

**Figure 3.** Erythematous regions on the paws.



**Source.** Elaboration of the authors.

**Figure 2.** Presence of cerúmen.



**Source.** Elaboration of the authors.

The main clinical suspicion for this patient was canine atopic dermatitis resulting from diet. The initial treatment consisted of cortisone for five days, administered every 12 hours, and prednisolone 1 mg/kg orally every 12 hours for three days. Topical treatment involved baths with custom-made shampoos containing 1% chlorhexidine, ketoconazole, and aloe vera, along with a solution for coat hydration, twice a week for 30 days.

Additionally, since the animal was on a natural diet, an exclusion diet and attack diet were recommended. This involved removing all the food the animal was accustomed to and gradually introducing each food item (attack diet). For example, for the first week, only mandioquinha (a type of root vegetable) was given, followed by mandioquinha with egg in the second week, and mandioquinha with meat and egg in the third week. The goal was to identify if any of the added foods were causing the dermatological allergy in the animal.

The patient was reevaluated, this time at the veterinary hospital, 40 days after the initial consultation, and already showed significant improvement since the onset of symptoms (Figure 4). There were no longer any signs of ear pruritus (Figure 5). However, although the dermatitis was showing signs of recurrence after the inclusion of egg in the diet, it was necessary to temporarily remove the food from the animal's diet and add treatment with Oclacitinib 2.5 mg, with one capsule every 48 hours. In addition, a high-performance hydration mask was included in the topical treatment until further recommendations. A follow-up appointment was scheduled, but the owner has not attended yet.

**Figure 4.** Animal showing improvement.



**Source.** Elaboration of the authors.

**Figure 5.** Ear region without cerumen.



**Source.** Elaboration of the authors.

**Figure 5.** Animal with significant improvement.



**Source.** Elaboration of the authors.

### 3. Discussion

Just like the patient in this case report, the most commonly affected areas are the distal limbs, face, ventral region, and ears. It is more common to observe erythema, macular and papular eruptions (Shultz; Andreoni, 2017). The literature mentions that breeds at higher risk include Yorkshire Terrier, Labrador Retriever, Boxer, Fox Terrier, Pug, Lhasa Apso, Dalmatian, Shih Tzu, Shar-Pei, Cocker Spaniel, Golden Retriever, while breeds at lower risk include Poodles, Dachshunds, Dobermans, and Pinschers (Andrade *et al.*, 2022), coinciding with the breed treated in this case report.

The main clinical sign in the report and in the pathology is pruritus, and corticosteroids are used to reduce inflammation (Alves *et al.*, 2020), along with shampoos and lotions for skin and coat hydration. Currently, oclacitinib is also used in the treatment of atopic dermatitis, which directly inhibits pro-inflammatory enzymes. This treatment should be administered to dogs at least one year of age (Santos; Mendes; Morgado, 2017), and this particular animal was already six years old.

Once atopic dermatitis is diagnosed, the owner must be aware that there is no cure, and the disease requires lifelong treatment. This guidance was provided to the owner of the patient in this case report.

### 4. Conclusion

Canine atopic dermatitis is a commonly encountered disease in veterinary practice. Despite the challenges of diagnosing the condition, by combining clinical signs and patient history, it is possible to provide appropriate therapy for improving the patient's quality of life. In this case report, it was possible to observe improvement in the patient's condition since their first visit to the veterinarian. Additionally, it was suspected that a specific food they were consuming may have

been contributing to their dermatopathies, although this could not be confirmed due to the owner not returning for follow-up. Nonetheless, it was plausible that the instituted therapy and treatment played a significant role in the patient's clinical improvement.

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