CLINICAL AND EVOLUTIVE ASPECTS IN DERMATOLOGICAL DISEASE THERAPY IN DOGS

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Abstract

In veterinary pathology, dermatopathies represent a challenge for the veterinarian due to the complex etiology and pathogenesis. More and more common, dermatological conditions have a diversity of clinical and evolutive aspects, which is why it is difficult to make a diagnosis of certainty and to establish a proper treatment. The aim of this study is to highlight the evolution of some dermatopathies by making a complete allergic investigation with an epidemiological investigation and a complex clinical examination, with an emphasis on the topical or systemic treatment used that has a favorable influence on the evolution of the disease. The clinical trial was conducted in a veterinary clinic, on 17 dogs in which 27 dermatopathies with different etiologies were diagnosed, treated and monitored. The materials and methods used consisted of: allergy investigation that provides information about the patient's situation; clinical examination consisting of evaluation of apparent mucous membranes, facies, attitudes, abnormal behavior, maintenance status, temperament, body temperature, pulse, cardiac and respiratory rate of the patient; complementary examinations: brushing, scotch-test, trichogram, cutaneous scarring, cytological exam, cutaneous biopsy, ultraviolet light exam, mycological examination, bacteriological examination, allergic tests, immunological tests, endocrine tests. Dermatopathies revealed a clinico-lesional pleiomorphism with the following manifestations: pruritus, alopecia, pyodermatitis, erythema, papules, crusts; which required a differential diagnosis and after performing the complementary examinations it was allowed the diagnosis of certainty. Of the 27 dermatopathies examined, 40.74% had bacterial etiology, 25.92% had micotic etiology, 18.51% had parasitic etiology, 11.11% had allergic etiology, 3.7% had other causes. Bacterial dermatitis has the highest occurrences with both superficial and deep pyoderma. To relieve pruritus it was used therapeutic baths with antiseboric and chlorhexidine shampoos, which provided body hygiene and completed the systemic treatment of superficial and deep pyodermatitis with bacterial and micotic etiology. The most effective treatment approach was achieved by combining both antibiotherapy, antipruritic therapy, topical antiparasitic drugs and dietary food, according to the established certainty diagnosis, the evolution being favorable.

Keywords: *dermatological diseases, dogs, evolution, therapy*

Introduction

In veterinary pathology, dermatopathies represent a challenge for the veterinarian due to the complex etiology and pathogenesis. More and more common, dermatological conditions have a diversity of clinical and evolutive aspects, which is why it is difficult to make a diagnosis of certainty and to establish a proper treatment[1, 3].

The aim of this study is to highlight the evolution of some dermatopathies by making a complete allergic investigation with an epidemiological investigation and a complex clinical examination, with an emphasis on the topical or systemic treatment used that has a favorable influence on the evolution of the disease [4, 6].

Material and methods

The clinical trial was conducted in a veterinary clinic, on 17 dogs in which 27 dermatopathies with different etiologies were diagnosed, treated and monitored.

The materials and methods used consisted of:

- allergy investigation that provides information about the patient's situation: knowledge of the age and the breed of the patient is very important, as some breeds are more prone to sensitivity to certain environmental allergens; knowledge of the diet used because many

dogs develop food intolerances; the presence or absence of parasites, as well as the presence of flea debris reveals important information for a diagnosis; absence or presence of pruritus; local or systemic therapy used before presentation at a veterinarian [5];

- Clinical examination consisting of evaluation of apparent mucous membranes, facies, attitudes, abnormal behavior, maintenance status, temperament, body temperature, pulse, cardiac and respiratory rate of the patient [9];
- Complementary examinations: brushing, scotch-test, trichogram, cutaneous scarring, cytological exam, cutaneous biopsy, ultraviolet light exam, mycological examination, bacteriological examination, allergic tests, immunological tests, endocrine tests [2];

For systemic therapy, 6 classes of therapeutic agents were used: glucocorticoids, H1 antihistamines, antibiotics, antimycotics, antiparasitics and immunomodulators. Cutaneous agents used in the local therapy have been represented by topical antipruritic, antiparasitic, antibacterial, antifungal, astringents, emollients and moisturizers [7, 8].

Results and discussions

The results concerning the etiology, treatment and healing time of the 17 investigated patients are presented in the following tables and graphs.

Table 1.

Classification of canine dermatopathies according to etiology

Etiology	Number of cases	%
Bacterial dermatitis	11	40,74
Parasitic dermatitis	5	18,51
Allergic dermatitis	3	11,11
Mycotic dermatitis	7	25,92
Another cause	1	3,70

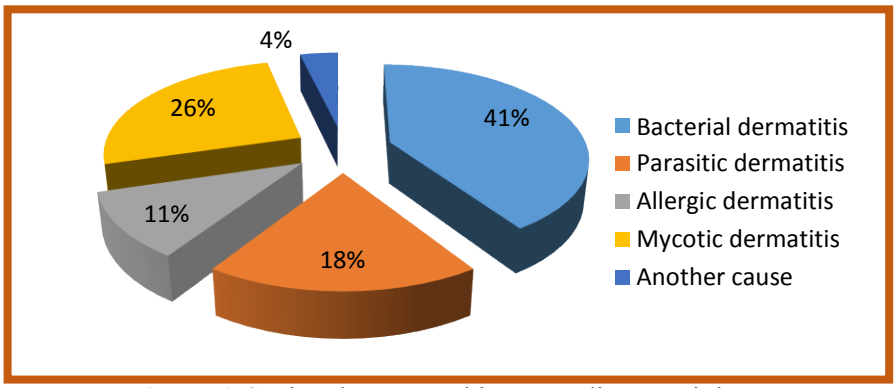

Figure 1 Canine dermatopathies according to etiology

The results presented in Table 1 and Figure 1 show that in the 27 evaluated dermatitis, 11 were diagnosed as dermatitis with bacterial etiology, 7 with dermatitis with mycotic etiology, 5 with dermatitis with parasitic etiology, 3 with dermatitis with allergic etiology and 1 patient with dermatitis with traumatic etiology.

Table 2.

Diagnosis and recovery time of evaluated dogs in this study

No. of case	Breed	Age, sex	Diagnosis	Recovery and re-evaluation time
1	Akita Inu	1 year 8 months, ♂	Superficial pyoderma	2 months
2	Mixed-breed	1 year 3 months, ♂	Superficial pyoderma, Demodicosis	1 month
3	Mixed-breed	6 years, ♀	Demodicosis	4 months
4	Akita Inu	5 years, ♀	Superficial pyoderma, Atopic dermatitis	6 months
5	Shitzu	2 years, ♀	Otitis media, Demodicosis	5 months
6	Boxer	1 year 6 months, ♂	Demodicosis, Otitis media	2 months
7	English Bulldog	2 years 3 months, ♂	Superficial pyoderma	6 months
8	Caniche	9 years, ♂	Superficial pyoderma, Otitis media	4 months
9	Alaskan Malamute	3 years, ♂	Mycotic dermatitis	1 month
10	Amstaff	5 years 6 months, ♀	Superficial pyoderma	3 months
11	Shitzu	3 months, ♂	Superficial pyoderma,	1 month
12	Labrador Retrievers	3 years, ♂	Traumatic pyoderma	1 month
13	Shar-pei	4 years, ♂	Superficial pyoderma, Otitis media	1 month
14	Beagle	3 years, ♂	Superficial pyoderma, Mycotic dermatitis	1 month
15	Dwarf Schnauzer	2 years, ♀	Atopic dermatitis	3 months
16	Pug	3 years, ♂	Atopic dermatitis	2 months
17	French Bulldog	1 year, ♂	Demodicosis, Atopic dermatitis, Furunculosis, Superficial pyoderma	2 months

In dermatopathies with bacterial etiology, antibiotic therapy was administered for at least 14 days, in some cases it was necessary a prolonged administration, reaching a period of 2-3 months. Treatment continued for another week after the lesions disappeared. Antibiotic therapy was represented by the following preparations: Xiclav, Synulox, Kessium, associated with a probiotic (Eubiotic).

Figure 2 Bacterial dermatitis

Figure 3 Parasitic dermatitis

For parasitic dermatopathies, external solutions or antiparasitic chewable tablets such as Advocate spot-on solution, Bravecto, have been successfully used. It has been noticed that periodic use of antiparasitic agents plays an important role in the treatment of dermatopathies.

In the case of allergic dermatopathies, the intradermal test revealed allergens, in which two patients were diagnosed positively and immunotherapy was administered for at least 2 years. Local therapy with promising results such as Allerderm Spot-on has been applied helping to restore skin integrity.

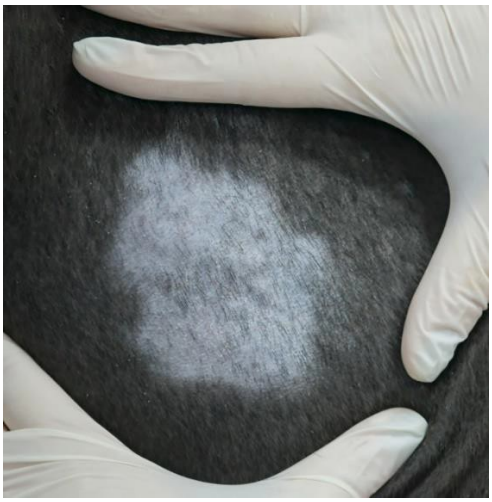

Figure 4 Allergic dermatitis

Figure 5 Mycotic dermatitis

Figure 6 Mycotic dermatitis

For fungal dermatitis, it was successfully used ointments and drugs with antimycotic substances such as Fungiconazol, Micodermin.

In addition to specific systemic and local treatments, good results have been seen when it was used the hypoallergenic food diet. Also an important role in relieving the lesions was the treatment baths with antiseboric shampoo or Clorexiderm shampoo 4% based on chlorhexidine digluconate.

Table 3.

The distribution of cases according to evolution

No of cases	Evolution		
	favorable	stationary	unfavorable
27	24	2	1

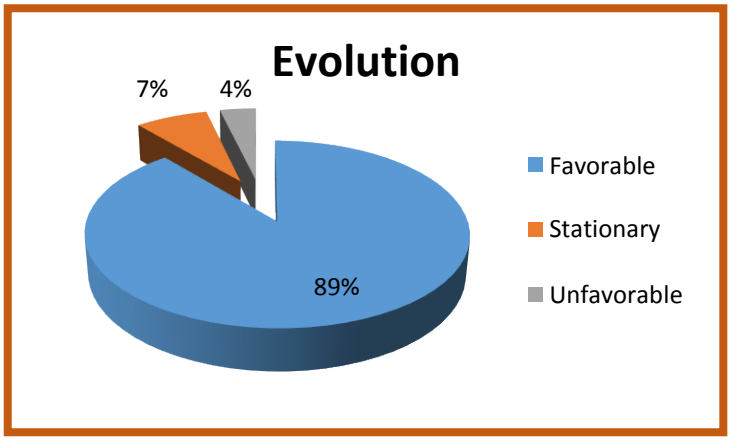

Figure 7 Percent representation of cases according to evolution

Conclusions

Following the examination of the 27 cases of dog dermatitis we can conclude:

1. Dermatopathies revealed a clinico-lesional pleiomorphism with the following manifestations: pruritus, alopecia, pyodermatitis, erythema, papules, crusts, which required a differential diagnosis and after performing the complementary examinations it was allowed the diagnosis of certainty.
2. Of the 27 dermatopathies examined, 40.74% had bacterial etiology, 25.92% had micotic etiology, 18.51% had parasitic etiology, 11.11% had allergic etiology, 3.7% had other causes. Bacterial dermatitis has the highest occurrences with both superficial and deep pyoderma.
3. Allergic dermatitis required a difficult differential diagnosis, requiring an intradermmatic test to reveal the allergens found in the two studied cases.
4. Complementary examinations such as trichography and skin rash have highlighted parasites such as *Demodex spp*. For this parasitic dermatitis, a favorable result has been the use of spot-on pipettes, such as Advocate (which contains Imidacloprid and Moxidectin).
5. To relieve pruritus it was used therapeutic baths with antiseboric and chlorhexidine shampoos, which provided body hygiene and completed the systemic treatment of superficial and deep pyodermatitis with bacterial and micotic etiology.
6. The most effective treatment approach was achieved by combining both antibiotherapy, antipruritic therapy, topical antiparasitic drugs and dietary food, according to the established certainty diagnosis, the evolution being favorable (Table 3 and Fig. 7).

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