

Interest of Essential 6[®] spot-on for the management of ichthyosis and sebaceous adenitis

2 CLINICAL CASES



Sebaceous adenitis and mural folliculitis in a cat responsive to topical fatty acid supplementation

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Autosomal recessive congenital ichthyosis due to *PNPLA1* mutation in a golden retriever–poodle cross-bred dog and the effect of topical therapy

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CONTEXT

Sebaceous adenitis is an uncommon dermatosis in dogs and rare in cats and rabbits¹⁻⁶. A number of successful treatment protocols, in particular topical therapy and ciclosporin, have been reported for dogs with sebaceous adenitis^{7,8}. To this day, successful treatment of feline sebaceous adenitis has been reported in only one cat, with a good clinical response to ciclosporin³.



OBJECTIVE OF THIS CASE

This report describes a case of feline sebaceous adenitis and mural folliculitis, and its successful management with topical essential fatty acids.



CASE REPORT

Animal

A 5-year-old spayed male Norwegian Forest cat.

Medical history: progressive scaling over 5 months, beginning on the face and the neck.

Previous treatments: combination of systemic antibiotics, prednisolone and monthly flea treatment. Only a partial and short-term clinical response has been observed.

Clinical examination & diagnosis

Histopathology revealed a severe, multifocal, lymphocytic mural folliculitis, a perifollicular dermatitis, moderate hyperkeratosis and sebaceous adenitis. A dense lymphocytic infiltrate effaced completely or partially the sebaceous glands. Based on these results, a final diagnosis of sebaceous adenitis with concurrent mural folliculitis was established.

Treatment

Evolution of this case involved 3 phases of therapy:

1. Initial treatment protocol with topical (Infectopyoderm[®], InfectoPharm) and systemic antibiotics (9 mg/kg subcutaneous, Convenia[®], Pfizer) resulted in partial clinical response and negative surface cytology after 3 weeks. Daily oral fatty acid supplementation (Vetconcept, Foehren) and topical cleansing with perfume-free wipes failed to produce any further improvement.

2. After the first phase, resulting in a progressive deterioration of the clinical signs over 6 months, a miticidal trial with selamectin (Stronghold[®], Pfizer), the same antibiotic therapy and a commercial elimination diet (Cat Allergy, Vetconcept) was initiated. 6 months after this trial, scaling of the face had mildly improved but skin lesions had extended to the legs.

3. After final diagnosis obtained from skin biopsies, **Dermoscent[®] Essential 6[®] spot-on** was applied as a sole therapy since the owners declined ciclosporin due to difficulties in administering oral medications and potential side effects. A marked clinical response and decrease of scaling was observed within 1 month and 6 months later, the cat showed an excellent, though incomplete, clinical response with regrowth of hair and marked decrease in seborrheic dermatitis.

This improvement was sustained for 12 months until a severe deep pyoderma occurred. The spot-on had not been applied for 4 weeks and the owners reported that they had failed to notice the dermatitis due to the dense hair coat. Treated with amoxicillin/clavulanic acid (17 mg/kg twice daily, Clavaseptin®, Vetoquinol) and topical moisturizing agent (Bepanthen®, Bayer) for 2 weeks, the cat rapidly improved. **Dermoscent® Essential 6® spot-on** and **ATOP 7® Spray** were added subsequently and the cat remained clinically stable for another 18 months with incomplete but good clinical resolution.

DISCUSSION

Therapeutic goals in sebaceous adenitis include the restoration of the skin barrier, the improvement of the inflammation of the sebaceous glands and the prevention of secondary bacterial infections. Even though ciclosporin has been reported in the successful treatment of this rare disease in cats, potential side effects and difficulties in oral administration have to be considered. Even though systemic fatty acid supplementation reported to be effective in some cases with dogs⁹, it did not help this cat. Thus, topical supplementation of essential fatty acids, like provided with **Dermoscent® Essential 6® spot-on**, may offer a viable alternative therapy.

CONCLUSION

This case demonstrates how long-term use of **Dermoscent® Essential 6® spot-on** might be considered a valuable alternative to ciclosporin based treatments for the management of sebaceous adenitis in cats.



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CONTEXT

Ichthyosis represents a genetically and phenotypically heterogeneous syndrome of abnormal epidermal cornification. Several subtypes of this condition have been grouped under the term « autosomal recessive congenital ichthyosis » (ARCI)¹. Clinical presentation, histopathological findings and genetic cause in golden retriever dogs have been well investigated but it remains challenging to characterize the optimal management of this disease.

OBJECTIVE OF THIS CASE

This report describes the management of a case of ARCI due to a *PNPLA1* (Patatin-like phospholipase domain containing 1) mutation in a golden retriever and poodle cross-bred dog (goldendoodle) with oral fatty acids supplementation associated with a topical therapy including **Dermoscent® Essential 6® spot-on**.

CASE REPORT

Animal

6-month old female goldendoodle dog (second generation, intact)

Medical history: generalized excessive scaling since the age of 6 weeks.

Previous treatments: oral fish and coconut oils, combined with a moisturizing shampoo once a week (HyLyt, Bayer Animal Health). Only limited benefits were provided by these treatments.

Clinical examination and diagnosis

At initial presentation, the dog presented a severe diffused generalized scaling, most prominent on the dorsum and lateral thighs, with white scales and some embedded hair shafts loosely adherent to the skin (Picture 1). Histopathology from 3 skin biopsies revealed diffuse, laminated-to-compact hyperkeratosis with mild hyperplasia and a single small perinuclear vacuole in occasional stratum granulosum keratinocytes. No dermal inflammation was reported. Altogether, the history, clinical signs and microscopic findings led to the diagnosis of an ARCI variant. Genetic testing was performed with a blood sample and confirmed the ARCI by showing a homozygotic insertion/deletion mutation in the gene *PNPLA1*.

Treatment

The initial treatment protocol with daily oral fatty acid supplementation (Efa-Z, Virbac®) and a humectant spray (Humilac, Virbac®), along with a weekly moisturizing shampoo (HyLyt, Bayer), resulted in mild improvement of clinical signs after 2 months. **Dermoscent® Essential 6® spot-on** was then added to the topical skin care protocol with a weekly application.

5 months after the initial presentation, a further improvement in dorsal scaling was seen and 13 months after the initial presentation, the dog showed a marked improvement in clinical signs (Picture 2).

In one instance, the owner reported that scaling had worsened when topical medications had not been applied for 2.5 weeks, even though oral fatty acid supplementation was still given.

The humectant spray was then discontinued without any deterioration reported. 18 months after the initial presentation, the disease was well controlled with a twice daily oral fatty acid supplementation and weekly application of the moisturizing shampoo, followed by **Dermoscent® Essential 6® spot-on**.



DISCUSSION

Topical applications of high concentrations of fatty acids are theoretically considered beneficial to improve clinical signs of ARCI, given that this genetic condition results in a defective metabolism of lipid formation². In this clinical case, as multiple products had been added to each other progressively, it is difficult to determine which treatment protocol would be optimal for the management of this disease. However, long-term combination of oral and topical fatty acids appeared to be beneficial. It is presumed that the topical therapy with **Dermoscent® Essential 6® spot-on** was important for the management of ARCI in this case because temporary discontinuation of the spot-on led to case deterioration, which improved again after resuming it.



Picture 1
Clinical condition before treatment



Picture 2
Clinical response after 13 months of treatment

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CONCLUSION

This case shows the interest of using **Dermoscent® Essential 6® spot-on** for the management of skin conditions resulting from defective lipid metabolism.



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