Nutritionally-based improvement of cats' skin & coat health, in Non-Flea, Non-Food-Induced Hypersensitive Dermatitis

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Introduction & objectives

Skin issues are described to be amongst the most frequent presenting complaints, they can affect pets' quality of life and trigger real caregiver burden [1]. Managing dermatological problems can be particularly challenging in feline species, as pruritus can be difficult to notice in 'secret groomers' cats and providing treatments can require specific skills from veterinary staff and owners [2]. Non-flea, non-food-induced hyper-sensitivity dermatitis (NFNFiHD) represents **up to 20% of cats with chronic pruritus** [3]. A study was initiated **to evaluate the benefits of a new nutritional solution** formulated to improve skin and coat health in neutered cats suffering from this chronic skin issue, throughout a **European multicenter clinical trial**.

Materials and methods

• Animals

Adult neutered cats with skin sensitivity and suspected to suffer from NFNFiHD were enrolled into the study by dermatologist veterinarians, from five European veterinary practices. Pruritus had to be present at inclusion.

Cats were not enrolled in several cases, particularly if suffering from pre-existing systemic disease, and blood tests were performed at recruitment stages to exclude such conditions.

For ethical reasons, drug usage was allowed, based upon veterinary assessment of cat's quality of life on an individual basis, and had to be recorded rigorously.

• Dietary solution

For two months, the included cats were fed exclusively the test diet: a dry food whose formula included ω 3-fatty acids to help in the management of inflamed skin, γ -linoleic acid to support coat quality and a combination of selected nutrients to help strengthen skin barrier (*Skin & Coat Feline, Royal Canin®, France*).

• Study design (Fig. 1)

• Recorded parameters

- ✓ Veterinary investigators evaluated cats' skin lesions via the **SCORFAD** scale (*SCORing Feline Allergic Dermatitis* [4]), along with body weight (BW) and body condition score (BCS); these were assessed at inclusion (V0), and after one (V1) and two months (V2).
- ✓ Amongst owners' evaluations were cats' overall skin & coat condition, **pruritus** (scale ranging from 0 (no pruritus) to 4 (severe pruritus, excessively present)), acceptance and digestive tolerance of the food. Digestive tolerance was evaluated via a fecal scoring, the scale ranging from 1 (diarrhea) to 5 (very hard stools, constipation), 4 corresponding to 'ideal score' [5].

Results

• Included population

Fifteen cats were included, and **eleven cats** completed the whole study. These were mostly European cats (93%), combining indoors and outdoors lifestyle. Female cats represented 67% of included population, and cats were 5y.o. in average at inclusion.

• Dermatological results

There was a **significant decrease of average pruritus score** (Fig. 2) between inclusion V0 (score=2.63) and final visit V2 (score=1) ($p=0.0018$). A significant difference in pruritus score was seen after four weeks already (from 2.63 at V0 to 1 at V1 ($p=0.0023$)).

Lesions improved also, **SCORFAD significantly decreasing** after 4 weeks (Fig. 3): from 6.9 at V0 to 2.4 at V1 ($p=0.0009$). This effect was maintained till the study completion (score evolving from 6.9 (inclusion) to 1.9 at V2 ($p=0.0003$)).

100% of cats who completed the study ($n=11/11$) **improved their pruritus and lesional scores** between inclusion and final visit.

Noteworthy, at intermediate visit V1, **except for anti-flea treatments** ($n=2$ cats), veterinarians deemed **no additional concomitant drug was necessary**.

• Results on other key criteria

Owner-assessed **palatability** and **digestive tolerance** of the food were evaluated as **good**.

Food attractivity didn't trigger weight gain in included cats: **BW and BCS were maintained** throughout the whole trial, with no statistically significant evolution (Fig. 5).

Impact

Testimonials from involved cat owners confirmed the veterinary-assessed results on nutrition benefits (Fig. 4), e.g. «She's got a better coat now and is scratching less», «He's clearly a less irritable cat». Without any price consideration to be taken into account, 100% of cat owners declared they would purchase the tested food.

Nutrition can constitute an efficient tool within the overall multimodal management of feline NFNFiHD. Further studies, such as randomized controlled trials, are warranted to confirm the efficacy of this new dietary solution.

References

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Conflict of interest statement:

Lesponne I, Rochon J. and Laxalde J. are employees of Royal Canin SAS, Boutigny L. was employee of Royal Canin SAS at the time of the study.

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