

Effectiveness of Nutritional Supplement (SKORA 33) in the Management of *Malassezia* dermatitis in Dogs

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Abstract

Malassezia dermatitis is one of the common dermatological conditions in dogs, often requiring comprehensive therapeutic management. Ten dogs were diagnosed with *Malassezia* dermatitis based on clinical signs and confirmed through direct microscopic examination of swab smears stained with Loeffler's methylene blue. Treatment was carried out with itraconazole with omega-3 and omega-6 fatty acids (SKORA 33), antioxidants, vitamins, and trace minerals. Over a three-week treatment period, the supplemented group recorded marked clinical improvement, including enhanced hair regrowth.

Keywords: *Malassezia* dermatitis, Dog, nutritional supplement (SKORA-33).

Introduction

Dermatological disorders are among the most frequently encountered clinical issues in small animal veterinary practice, with *Malassezia* dermatitis being a commonly reported in dogs. Although *Malassezia* species are part of the normal flora on the skin and mucous membranes of healthy dogs, their proliferation can become pathogenic under certain conditions. Successful case management of the condition is often dependent upon both treating yeast overgrowth with topical or systemic antifungal treatments, as well as identifying and correcting the predisposing factors. (Selvi *et al.*, 2024). SKORA-33 is a scientifically formulated plant-based blend fortified tablet with essential fatty acids, natural antioxidants, multi-vitamins, minerals (total 33 supplements) to optimize overall skin health of pets. The study has been conducted to assess the effect of SKORA-33 supplementation in dog with *Malassezia* dermatitis.

Materials and Methods

A total of ten dogs, irrespective of breed, age and sex that were presented to the small animal outpatient unit, Department of Veterinary Medicine, Rajiv Gandhi Institute of Veterinary Education and Research, Puducherry, with history and clinical signs

suggestive of *Malassezia* dermatitis formed the study group. Dogs already receiving any systemic or topical skin supplements within the last 30 days were excluded from this study. A detailed history, physical, and dermatological examination, followed by collection of samples for cytological examination was obtained from all ten dogs included in the study. Cytology, haematological and biochemical evaluation were undertaken (Marsella *et al.*, 2000). Comparison between pre-treatment (0 day) and post-treatment (29 day) was done using a paired t-test. These ten dogs that were positive on direct microscopic/cytological examination were administered with oral Itraconazole (@ 5mg/kg b wt, sid) for two consecutive days in a week for four weeks as recommended by (Pinchbeck *et al.*, 2002), antifungal shampoo and dermatological supplement tablet (SKORA 33) for 10 to 20 days based on severity. Haematological and biochemical parameters were estimated using haematological analyzer (IDEXX ProCyt Dx) and serum biochemical analyzer (FGBCAOE M001-OEM).

Results and Discussions

Clinical signs observed in the affected dogs are depicted in Table -1. These findings were in accordance with Selvi *et al.* (2024), who reported that pruritus, erythema, hyperpigmentation, malodour, and traumatic alopecia are the major clinical signs in dogs

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with *Malassezia* dermatitis (fig 1-5). No statistical significance between pre-treatment (0 day) and post-treatment (29 day) values of blood profile was noticed (Table 2). *Malassezia* organisms, appeared as small, oval to peanut- or footprint-shaped structures (Fig. 6).

Clinical response to supplement therapy was monitored on day 29 after 4 weeks of treatment using cytological evaluation and pruritus score. There was a considerable reduction in the mean yeast count and pruritus score post-treatment (Table 3).



At 0th day of Pre - treatment



At 29st day of Post - treatment

Fig.1. Dog showing erythematous lesions with alopecia at sternal region



At 0th day of Pre-treatment



At 29st day of Post-treatment

Fig.2. Dog with hyperpigmentation with scaly lesions at ventral aspect of neck region



At 0th day of Pre-treatment



At 29st day of Post-treatment

Fig.3. Greasy rancid odour with erythematous lesions at face, neck and forelimbs.

At 0th day of Pre-treatmentAt 29st day of Post-treatment

Fig.4. Lichenification at full ventral aspect of the body.

At 0th day of Pre-treatmentAt 29st day of Post-treatment

Fig.5. Otitis externa with Epidermal collarettes.

At 0th day of Pre-treatmentAt 29st day of Post-treatment

Fig.6. Swab impression cytology showing budding yeast stained with Löffler's methylene blue.

Table 1: Clinical signs observed in dogs affected with *Malassezia dermatitis*.

SI No.	Clinical signs	No of animals (n* = 10)	Percentage
1.	Pruritus	10	100
2.	Musty/ rancid odour	10	100
3	Erythema	08	80
4	Scales	07	70
5	Hyperpigmentation	06	60
6	Hyperkeratinization	06	60
7	Lichenification	05	50
8	Greasiness	04	40
9	Epidermal collarettes	03	30
10	Otitis	02	20

(*n= sample size)

Table 2: Comparison of hematological and serum biochemical values, pre and post treatment in *Malassezia* affected dogs.

Sl No.	Parameter	Mean \pm SE*		t value	p value
		Pre-treatment (0 th day)	Post-treatment (29 th day)		
1	Hb (g/ dL)	9.66 \pm 0.42	9.29 \pm 0.68	1.81	0.103
2	PCV%	32.59 \pm 1.15	32.53 \pm 2.03	-1.15	0.280
3	TLC (x 10 ³ / cmm)	14.04 \pm 0.56	14.30 \pm 2.38	-0.57	0.586
4	Platelet ((x10 ³ / μ L)	289.7 \pm 30.48	246.4 \pm 62.9	1.32	0.220
5	ALT(U/L)	30.63 \pm 1.47	28.67 \pm 4.5	0.61	0.554
6	Total protein (g/dl)	7.12 \pm 0.26	6.99 \pm 0.41	-0.74	0.479
7	Albumin (g/dl)	2.693 \pm 0.10	2.83 \pm 0.13	-0.76	0.467

**P \leq 0.05 = ns (not significant) (*SE= Standard Error)

Table 3: Comparison of Visual Analog Scale in *Malassezia* affected dogs.

Sl. No	Parameter	Mean \pm SE*		t value	p value
		Pre-treatment (0 th day)	Post-treatment (29 th day)		
1	Visual analog scale for pruritus	3.500 \pm 0.2800	1.100 \pm 0.1500	7.55	< 0.0001**
2	Yeast load (mean yeast organism per oil immersion field)	4.300 \pm 0.6000	1.200 \pm 0.1900	4.93	\approx 0.0008**

** Significant at 0.01 level (P < 0.01), *SE = Standard Error.

Conclusion

The present study revealed that incorporating the nutritional supplement into standard antifungal therapy significantly improved the therapeutic outcome.

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