

Malassezia spp. overgrowth in allergic cats

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What is known about the topic of this paper

- *Malassezia* dermatitis and otitis are commonly diagnosed in dogs, especially in allergic individuals.
- This association has been reported only anecdotally in cats.
- *Malassezia* spp. overgrowth in cats is reported as a marker of serious, underlying diseases, including retrovirus infection and neoplasia.

What this paper adds to the field of veterinary dermatology

- To the authors' knowledge, this study represents the first reported case series of feline *Malassezia* spp. overgrowth associated with allergic skin disease.
 - The authors suggest that it should be investigated in all allergic cats and, in general, in those cats presented for dermatological examination displaying greasy adherent brownish scales.
 - The favourable response to antifungal treatment as the sole therapy in some cats suggests that, analogous to what is reported in allergic dogs, *Malassezia* spp. may be partly responsible for both pruritus and cutaneous lesions in allergic cats.
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Abstract

A series of 18 allergic cats with multifocal *Malassezia* spp. overgrowth is reported: atopic dermatitis was diagnosed in 16, an adverse food reaction in another and one was euthanized 2 months after diagnosis of *Malassezia* overgrowth. All the cats were otherwise healthy and those tested (16 out of 18) for feline leukaemia or feline immunodeficiency virus infections were all negative. At dermatological examination, multifocal alopecia, erythema, crusting and greasy adherent brownish scales were variably distributed on all cats. Cytological examination revealed *Malassezia*

spp. overgrowth with/without bacterial infection in facial skin ($n = 11$), ventral neck ($n = 6$), abdomen ($n = 6$), ear canal ($n = 4$), chin ($n = 2$), ear pinnae ($n = 2$), interdigital ($n = 1$) and claw folds skin ($n = 1$). Moreover, in two cats *Malassezia pachydermatis* was isolated in fungal cultures from lesional skin. Azoles therapy alone was prescribed in seven, azoles and antibacterial therapy in eight and azoles with both antibacterial and anti-inflammatory therapy in three of the cats. After 3–4 weeks of treatment, substantial reduction of pruritus and skin lesions was observed in all 11 cats treated with a combined therapy and in five of seven treated solely with azoles. *Malassezia* spp. overgrowth may represent a secondary cutaneous problem in allergic cats particularly in those presented for dermatological examination displaying greasy adherent brownish scales. The favourable response to treatment with antifungal treatments alone suggests that, as in dogs, *Malassezia* spp. may be partly responsible for both pruritus and cutaneous lesions in allergic cats.

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Introduction

The genus *Malassezia* consists of lipophilic yeasts, which are components of the cutaneous microflora of many warm-blooded animals including humans.¹ This genus has recently been revised, based on morphological, physiological and molecular criteria, to include six lipid-dependent and one nonlipid-dependent species.^{2,3} The lipid-dependent yeasts are represented by *M. furfur*, *M. globosa*, *M. obtusa*, *M. restricta*, *M. slooffiae* and *M. sympodialis*. However, new lipid-dependent species have been recently identified, including *M. japonica*, *M. yamatoensis*, *M. dermatis* and *M. nana*; the latter two are closely related to *M. sympodialis*.⁴

M. pachydermatis, the nonlipid-dependent yeast, has been considered to be a zoophilic yeast because it is frequently isolated from wild and domestic animals, particularly dogs and cats. *M. pachydermatis* is the species most frequently isolated from the skin, mucosae or ear canals of healthy cats, although other yeasts of the genus *Malassezia*, such as *M. sympodialis*, *M. globosa*, *M. furfur* and *M. nana* have been isolated.^{4–8}

Many of the lipid-dependent *Malassezia* species have been associated with various systemic and cutaneous diseases in humans.⁹ *Malassezia pachydermatis* dermatitis and otitis, associated with high numbers of yeasts, respectively, on the skin surface and the otic secretion, are commonly diagnosed in dogs, especially in allergic individuals.¹⁰ Atopic dermatitis has been described as a

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common predisposing factor for *Malassezia* dermatitis in humans and dogs,^{9,11} whereas this association has been reported only anecdotally in cats.^{12–14}

Predisposing factors for *Malassezia* spp. overgrowth on feline skin are unknown. In a retrospective study, the presence of *Malassezia* spp. on histopathological cutaneous sections was frequently related to thymoma-associated dermatitis and paraneoplastic alopecia.¹⁵ In addition, *Malassezia* spp. have been more frequently isolated from healthy ear canals and skin in feline leukaemia (FeLV)- or feline immunodeficiency virus (FIV)-infected cats than in those noninfected.¹⁶ Based on these findings, *Malassezia* spp. overgrowth in cats is reported as a marker of serious, underlying diseases, including retrovirus infection and neoplasia. However, *Malassezia* spp. overgrowth has been described also in feline localized benign exfoliative skin diseases, such as chin acne and the idiopathic facial dermatitis of Persian cats.^{17,18}

The purpose of this multicentre, retrospective and descriptive study was to document *Malassezia* spp. overgrowth in allergic cats. To the authors' knowledge, no data are available that quantify the number of yeast organisms present on the surface of normal feline skin. Therefore, to define an overgrowth in the study subjects, a prospective study was undertaken in a group of healthy cats to determine by cytological examination the number of yeasts on selected anatomic sites.

Materials and methods

Study subjects

The clinical records of cats with a diagnosis of allergic dermatitis and at least one episode of multifocal *Malassezia* spp. overgrowth were scrutinized in four referral practices. Only patients with complete information with regard to signalment, clinical presentation and follow up were considered, and 18 cats, visited for 6 years (2001–2006), were selected.

Diagnosis of allergic dermatitis

Diagnosis of allergic dermatitis was based on compatible clinical signs (head and/or neck pruritus [$n = 14$], self-induced symmetric alopecia [$n = 9$], miliary dermatitis [$n = 1$], with or without otitis externa [$n = 5$]). Ectoparasitic infestation and dermatophytosis were ruled out by dermatological examination ($n = 18$), microscopic examination of skin scrapings and plucked hairs ($n = 18$), fungal culture of plucked hairs ($n = 4$), and history of administration of ectoparasiticide therapy ($n = 18$). Moreover, results from dermatopathological examination of skin specimens obtained from six cats by biopsy were compatible with the diagnosis of allergic dermatitis. A Periodic acid–Schiff stain was applied to the samples from the six cats and all were negative for the presence of fungal elements. The diagnostic protocol for an allergic dermatitis consisted of the administration of flea control products for at least 2 months with either selamectin (Stronghold®, Pfizer Ltd, Kent, UK, 6 mg kg⁻¹ once monthly) ($n = 11$) or fipronil (Frontline® spot on, Merial Italia spa, Milan, Italy, once monthly) ($n = 7$) and an 8-week food trial with either a home-made diet with a novel source of protein ($n = 6$) or a commercial dry food containing hydrolysed proteins ($n = 11$). Unfortunately, one cat was euthanized 2 months after diagnosis of *Malassezia* spp. overgrowth without starting the food trial. The final diagnosis after reintroduction of the previous diet was adverse food reaction in one cat. Diagnosis of atopic dermatitis in the remaining 16 cats was based on the exclusion of other pruritic skin diseases and compatible clinical signs, as reported in other studies on feline atopic dermatitis.¹⁹

Diagnosis of *Malassezia* overgrowth

Cats referred for evaluation of allergic skin disease were screened for secondary *Malassezia* spp. overgrowth using the tape strip method. A piece of clear acetate tape was applied successively to lesional skin, two to three times, in each patient. Each sample was stained using Diff-Quick® (Medion Diagnostics GmbH, Düringen, Switzerland) and placed on a glass slide for microscopic examination. Because of the paucity of published data regarding cytological criteria for diagnosis of *Malassezia* overgrowth in cats, cytological examination of samples was based on criteria used to quantify *Malassezia* overgrowth on the skin of dogs.¹¹ Several random fields of each slide were examined at 400× (high power field) magnification. When a minimum number of yeast cells was exceeded (> 2 yeasts per high power field) in at least two different anatomical sites, *Malassezia* spp. overgrowth was established.

Fungal culture for isolation of *Malassezia* yeast was performed in two cats. Briefly, the chin in cat number 7 and abdomen in cat number 18 were sampled using a modified detergent scrub technique. The wash fluid was composed of 0.075 mol L⁻¹ phosphate-buffered physiological saline, pH 7.9 containing 0.1% Tween 80. Skin areas were gently rubbed for 60 s using sterile tubes containing 2 mL of wash fluid. Aliquots of 25 µL were within 30 min of collection, inoculated onto plates of Sabouraud Glucose Agar medium (SGA; Biolife, Milan, Italy), supplemented with 0.05% of chloramphenicol and 0.05% of cycloheximide. The plates were then incubated at 35 °C for 4 days before identification of *M. pachydermatis* by gross colony and microscopic morphology, and by its ability to grow on SGA.²⁰

Treatment

Azoles as the sole therapy were prescribed in seven cats and consisted of itraconazole (Itrafungol®, Janssen Animal Health, Milan, Italy, 5 mg kg⁻¹ once daily) in five cats and ketoconazole (Nizoral®, Janssen-Gilag SPA, Milan, Italy, 6–10 mg kg⁻¹ once daily) in two cats. Adjunctive topical therapy with chlorhexidine was used in five of these seven cats. Azoles and antibiotics, such as cephadroxil (Cefacure Tabs®, Intervet Italia, Peschiera Borromeo, Italy, 20 mg kg⁻¹ once daily), cephalexin (Icf Vet®, ICF, Cremona, Italy, 20 mg kg⁻¹ twice daily) and enrofloxacin (Baytril®, Bayer, Milan, Italy, 5 mg kg⁻¹ once daily) therapy was prescribed in eight cats and azoles with both antibiotics and anti-inflammatory therapy such as prednisolone (Vetsolone Compresse®, Bayer, Milan, Italy, 1 mg kg⁻¹ once daily) or betamethasone (Celestone®, Schering-Plough, Milan, Italy, 0.05 mg kg⁻¹ once daily) in the remaining three.

Control group

Eighteen healthy cats with no history of dermatological problems were included as a control group for evaluation of *Malassezia* yeast density on normal feline skin. They were FeLV/FIV negative, and were not receiving any medical treatment at the time of sampling. They comprised 13 neutered males and five spayed females, 1–7.5 years of age (mean, 3.5 years). Samples from the mid ventral abdomen ($n = 18$), ventral interdigital space ($n = 72$), face ($n = 18$) and chin ($n = 18$) were obtained for cytological examination. Hair was cut with scissors and a piece of clear acetate tape (Scotch® Crystal Clear 600, 3M France, Cergy-Pontoise Cedex, France, 1.9 cm × 2 cm) was pressed five consecutive times on the skin surface. The tapes were stained with Diff-Quick® and applied to a glass slide for microscopic analysis. Slides were initially examined microscopically at 100× magnification to locate areas where keratinocytes were present. Within these areas, 10 consecutive fields were examined at 1000× (high power under oil immersion) magnification. The total number of *Malassezia* yeasts found in 10 consecutive oil-immersion fields was recorded.

Results

Signalment and history

Location of referral clinic, signalment, age at time of diagnosis and duration of pruritus before diagnosis of *Malassezia* are shown in Table 1. The cats ranged from 2 to 15 years of age, and the mean age at the time of

Malassezia spp. overgrowth diagnosis was 7.6 years. All cats were otherwise healthy and those tested (16 of 18) for FeLV/FIV infections were all negative.

All cats but one had been previously treated with single or combined therapies with systemic glucocorticoids ($n = 13$), systemic antibiotics ($n = 6$), topical glucocorticoids ($n = 3$), systemic antifungal treatments ($n = 2$), systemic antihistamines ($n = 1$), systemic cyclosporin ($n = 1$) and topical otic therapy ($n = 1$). At the time of diagnosis of *Malassezia* spp. overgrowth, eight cats were receiving pharmacological therapy for their pruritic skin disease. In detail, three cats were receiving topical betamethasone, two oral prednisone, one injectable prednisone, one oral betamethasone and one cyclosporin.

Clinical signs

Distribution and type of lesions observed in the 18 allergic cats are shown in Table 2. Skin lesions associated with *Malassezia* spp. overgrowth consisted of multifocal areas of alopecia, erythema, crusting and greasy adherent brownish scales, which were observed in all the patients. Other clinical signs were observed in a variable number of cats such as increased cerumen ($n = 4$), hyperpigmentation ($n = 3$), hair easily plucked ($n = 2$) and follicular casts ($n = 2$).

The most frequent distribution was the face ($n = 11$), ventral neck ($n = 6$), abdomen ($n = 6$) and ear canal ($n = 4$). Chin ($n = 2$), ear pinnae ($n = 2$), interdigital skin ($n = 1$) and claw folds ($n = 1$) were also affected (Figs 1–4).

Diagnostic tests

Cytological examination of the multiple segments of acetate tape revealed increased numbers of *Malassezia* spp. organisms in at least two different anatomical sites, characterized by > 2 yeasts per high power field (400x) with/without bacterial infection, characterized by neutrophils and intracellular cocci. Yeasts were often seen in clusters or adhered to corneocytes (Fig. 5).

Malassezia pachydermatis was isolated from the fungal cultures in both of the cats studied.

Outcome

Responses to therapy in the 18 allergic cats with *Malassezia* overgrowth are shown in Table 2. After 3–4 weeks of treatment, substantial reduction of pruritus and skin lesions was observed in five of seven cats treated with only azoles (Fig. 6) and in all the 11 cats treated with combined therapy (Fig. 7). No adverse effects clearly attributable to therapy were reported.

Two cats had relapses of *Malassezia* spp. overgrowth. They occurred at 6 months after the initial diagnosis in one and several times over a 2-year follow up in the second. Both cats responded positively to the azoles as the sole therapy.

Control group

Microscopic examination revealed the presence of *Malassezia* spp. in seven of 18 cats. In five cats, yeasts were observed at only one anatomical site, while in two, *Malassezia* organisms were present at two or three sites. Yeasts were detected in samples from the ventral interdigital space ($n = 5$), abdomen ($n = 2$), face ($n = 2$) and chin ($n = 1$). In nine positive samples one yeast was detected, and in one two yeasts were detected per 10 oil-immersion fields.

Discussion

To the authors' knowledge, this study represents the first reported case series of feline *Malassezia* spp. overgrowth associated with allergic skin disease. In reviewing the signalment, history and clinical signs of this condition in cats, it appears that there are both similarities and differences if compared with its canine counterpart.

The predisposing factors for overgrowth of *M. pachydermatis* on the skin of dogs are still not completely known. Two proposed triggering mechanisms for canine

Table 1. Signalment, age at time of diagnosis and duration of pruritus before diagnosis of *Malassezia* overgrowth in 18 allergic cats

Cat number – location	Breed	Sex	Age at time of diagnosis (years)	Duration of pruritus before diagnosis
1 – SDV	Siamese	Mc	10	8 months
2 – SDV	DSH	Mc	15	2 months
3 – SDV	DSH	Fs	8	1.5 years
4 – SDV	DSH	Fs	12	1 year (seasonal)
5 – SDV	DSH	Fs	4	3 years
6 – CVP	DSH	Fs	10	6 years
7 – UAB	DSH	Mc	5	2 years
8 – CVP	Siamese	Fs	9	6 years
9 – SVG	Persian	Mx	7	6 years
10 – SVG	DLH	Fs	5	3 years
11 – SVG	DSH	Fs	8	3 months
12 – SVG	DSH	Fs	11	5 years
13 – SVG	Persian	Mc	8	2 years
14 – SVG	DLH	Mc	8	2 months
15 – SVG	Persian	Fs	2	1.5 years
16 – SVG	DLH	Fs	3	6 months
17 – SVG	DSH	Fs	9	8 years
18 – UAB	DSH	Fs	4	8 months

Fs, female spayed; Mc, male castrated; Mx, male cryptorchid; DSH, domestic short-haired cat; DLH, domestic long-haired cat;

SDV, Studio Dermatologico Veterinario, Milano; CVP, Centro Veterinario Prati, Roma; UAB, Universitat Autònoma de Barcelona, Barcelona;

SVG, Studio Veterinario Corsi-Galeotti, Prato.

Table 2. Clinico-pathological findings and response to therapy in 18 allergic cats with *Malassezia* overgrowth

Cat number	Distribution of lesions	Type of lesions	FeLV/FIV	Therapy/response
1	• Ear pinnae, face and neck	• Alopecia, erythema, excoriations, crusting and scaling	–	Cephadroxil and itraconazole and ear topical therapy with clotrimazole and dexamethasone/+++
2	• Medial aspect of front legs, abdomen and hind legs	• Alopecia	–	Cephalexin and itraconazole/+++
	• Claw fold	• Scaling		
	• Ear canal	• Erythema, increased cerumen		
	• Face	• Alopecia, tumefaction, scaling, hyperpigmentation		
	• Medial aspect of both carpus	• Ulcers		
3	• Chin	• Alopecia, tumefaction, papules and crusting	ND	Cephadroxil and itraconazole/++
	• Ear pinnae and abdomen	• Erythema		
	• Claw fold	• Scaling		
4	• Ventral and lateral thorax, abdomen, medial and lateral aspect of hind legs	• Alopecia, hair easily plucked, scaling and hyperpigmentation	–	Itraconazole and topical chlorhexidine/++
5	• Abdomen	• Alopecia, erythema, scaling and follicular casts	–	Itraconazole/0
	• Face and chin	• Alopecia, crusting, scaling and follicular casts		
	• Front and hind legs	• Alopecia		
6	• Abdomen	• Alopecia, erythematous maculae and papules, brownish scales	–	Ketoconazole and topical chlorhexidine/++
7	• Abdomen, medial aspect of hind legs, ear pinnae	• Alopecia, hair easily plucked, erythema and scaling	–	Itraconazole and topical chlorhexidine/+++
	• Ear canals	• Erythema, increased cerumen		
	• Dorsal neck	• Alopecia		
	• Chin	• Brownish scales		
8	• Face and chin	• Alopecia and brownish scales	ND	Itraconazole and topical chlorhexidine/0
	• Ventral thorax, abdomen, medial aspect of front and hind legs and perianal region	• Alopecia, erythema, maculae and brownish scales		
9	• Face, ventral neck, chin and ear pinnae	• Alopecia, erythema, excoriations, crusting and brownish scales	–	Enrofloxacin, itraconazole and ear topical therapy with miconazole and prednisone/++
10	• Face, chin and head	• Crusting and scaling	–	Enrofloxacin and itraconazole/++
11	• Dorsal and ventral neck, ear pinnae	• Alopecia, erythema, excoriations, crusting and hyperpigmentation	–	Oral prednisolone, enrofloxacin and itraconazole/+++
	• Abdomen	• Papules and crusting		
12	• Face, ventral neck, ventral thorax and medial aspect of front legs	• Alopecia, erythema, excoriations, crusting and scaling	–	Oral betamethasone, enrofloxacin and itraconazole/++
13	• Face	• Alopecia, erythema, excoriations and crusting	–	Enrofloxacin and itraconazole/++
	• Ear canals	• Erythema, increased cerumen		
14	• Face, ventral neck, abdomen and medial aspect of hind legs	• Alopecia, erythema, crusting and brownish scales	–	Enrofloxacin, itraconazole and oral prednisolone/++
	• Medial aspect of left carpus			
15	• Face and ventral neck	• Ulcer	–	Enrofloxacin and itraconazole/+++
16	• Face and ear pinnae	• Alopecia, erythema, excoriations, crusting and scaling	–	Itraconazole and ear topical therapy with miconazole and prednisone/+++
		• Alopecia, erythema and brownish scales		
17	• Ventral and lateral neck	• Alopecia, erythema, excoriations, brownish scales	–	Enrofloxacin and itraconazole/++
18	• Head	• Crusting	–	Ketoconazole and topical chlorhexidine/++
	• Ear canals	• Erythema, increased cerumen		
	• Chin	• Alopecia, erythema and crusting		
	• Abdomen	• Alopecia, erythema and follicular casts		
	• Front legs	• Alopecia		

ND, not done; –, negative.

Response to therapy: +++, complete resolution; ++, partial resolution; 0, no response.



Figure 1. Face of a cat with *Malassezia* spp. overgrowth. Case 5. Mild alopecia with crusting, scaling and follicular casts.

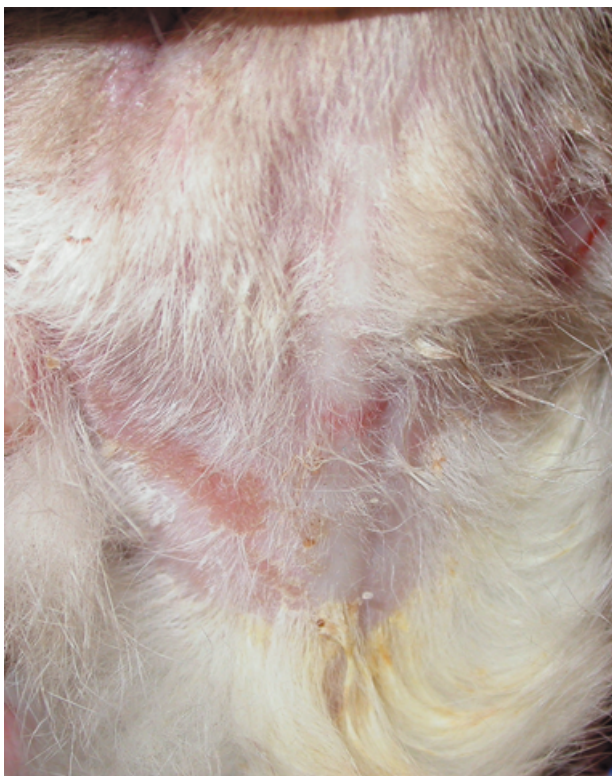


Figure 2. Ventral neck of a cat with *Malassezia* spp. overgrowth. Case 1. Alopecia with erythema, excoriations, crusting and brownish adherent scales.

yeast overgrowth are imbalances in the host defence mechanisms and changes in the cutaneous microenvironment, with the most common predisposing factors being hypersensitivity disorders (especially atopic dermatitis).¹¹ The current findings suggest that this may also be the situation in cats. However, in contrast to allergic dogs, in which *Malassezia* spp. overgrowth is frequently diagnosed, this condition is apparently less common in allergic cats, perhaps because changes in the cutaneous microenvironment secondary to the allergic disease may be less numerous and/or different.

Malassezia spp. overgrowth occurs in dogs of any age, sex and breed, but is more often diagnosed in dogs



Figure 3. Abdomen of a cat with *Malassezia* spp. overgrowth. Case 5. Alopecia with erythema, prominent scaling with brownish adherent scales and follicular casts.



Figure 4. Lateral abdomen of a cat with *Malassezia* spp. overgrowth. Case 4. Alopecia, hair easily plucked, scaling and hyperpigmentation.

between 1 and 3 years old.¹¹ Based on the case series herein described, it would seem that *Malassezia* spp. overgrowth may also affect cats of any age and of both sexes, although it is more often diagnosed in mature-adult cats. It must be taken into account that the mean age of the cats reported in this case series might reflect a different age of onset of atopy (between 6 months and 8.5 years)²¹ from that of the dog, where the typical age of onset of atopic dermatitis is between 6 months and 3 years.²²

Skin lesions related to *Malassezia* spp. overgrowth commonly occurred on the face, ventral neck, abdomen and ear canals, a distribution that seems to parallel that of feline allergic pruritus and is similar to the situation in dogs.^{11,21} These lesions were characterized by some degree of alopecia, erythema, greasy adherent brownish scales, increased cerumen, hyperpigmentation, easily plucked hair and follicular casts. Hyperpigmentation and lichenification commonly observed in chronic canine cases were rarely (hyperpigmentation) or not seen (lichenification) in the cats, suggesting that feline skin might respond to a chronic inflammatory stimulus in a different manner from canine skin.

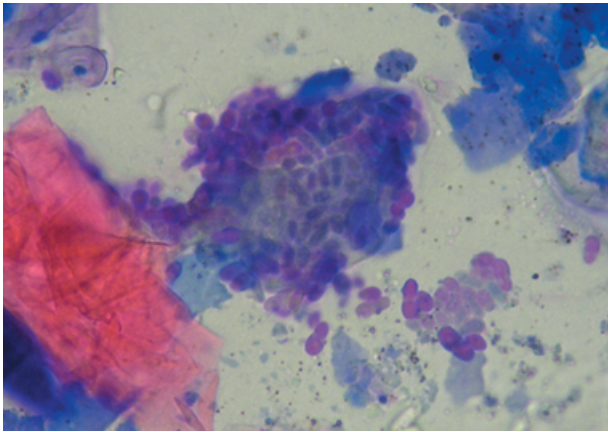


Figure 5. Cytological examination. Yeasts compatible with *Malassezia* organisms are seen aggregated in clusters and adhered to keratinocytes (Diff Quick®, 1000×).



Figure 6. Same cat as Figure 4 four weeks after therapy with only itraconazole (5 mg kg⁻¹ once daily) and topical chlorhexidine.

The criteria required for the diagnosis of *Malassezia* dermatitis have not been definitively established in the dog. It has been proposed that such a diagnosis is appropriate when a dog with elevated numbers of yeasts on lesional skin shows good clinical and mycological responses to antifungal therapy.¹¹ Cytological examination is the most useful technique for assessment of *Malassezia* density on the skin surface. Several cytological criteria have been proposed to diagnose canine *Malassezia* overgrowth including the observation of more than two organisms per high power field (400×) in skin specimens.¹¹

Malassezia spp. overgrowth in the allergic cats was diagnosed on the basis of the cytological examination of tape strips using one of the criteria proposed for diagnosis of *Malassezia* overgrowth in dogs. To the authors' knowledge, no reports have been published that provided details of yeast density on the surface of normal feline skin. Although *Malassezia* spp. are part of the microflora of the skin of clinically normal cats, it was difficult to detect the organism by the tape strip method in the majority of cats in the control group. Moreover, *Malassezia* organisms on the skin of healthy cats were found in low numbers and predominantly at only one anatomical site. Therefore, the

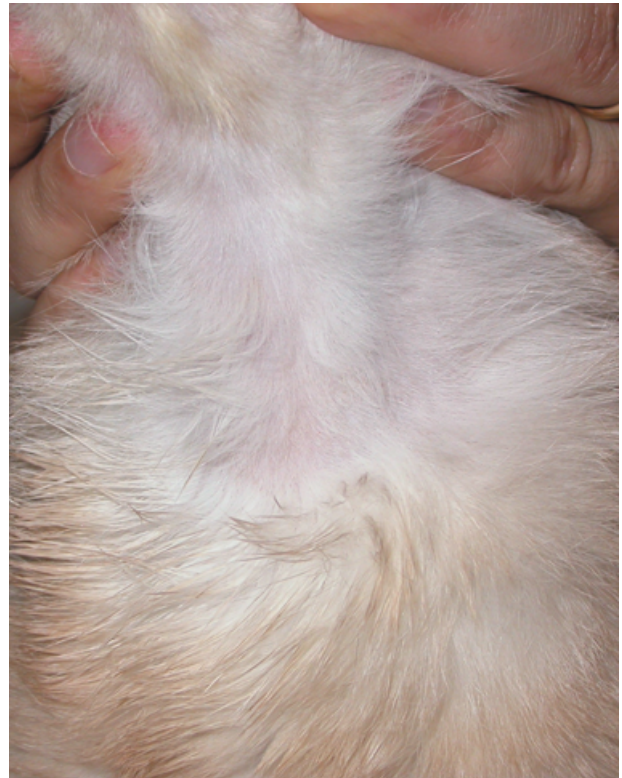


Figure 7. Same cat as Figure 2 four weeks on combined therapy with cephradroxil (20 mg kg⁻¹ once daily) and itraconazole (5 mg kg⁻¹ once daily).

cytological results from allergic cats were compatible with an overgrowth of yeast density.

The favourable response to antifungal treatment as the sole therapy in five of seven cats suggests that, analogous to reports in allergic dogs, *Malassezia* spp. may be partly responsible for both pruritus and cutaneous lesions in allergic cats. However, prospective controlled studies are required to confirm that, analogous to what is suggested in dogs, cats with elevated numbers of yeasts on compatible cutaneous lesions and a favourable clinical response to specific antifungal therapy, have *Malassezia* dermatitis.

In conclusion, *Malassezia* spp. overgrowth may represent a secondary cutaneous problem in allergic cats. The authors suggest that it should be investigated in all allergic cats and, in particular, those presented for dermatological examination displaying characteristic, mainly ventral, greasy adherent brownish scales.

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Résumé Une série de 18 chats allergiques avec une prolifération de *Malassezia* spp. Est décrite; une dermatite atopique a été diagnostiquée pour 16 cas, une réaction alimentaire dans un cas et un chat a été euthanasié deux mois après le diagnostic de dermatite à *Malassezia*. Tous les chats étaient par ailleurs en bonne santé et ceux testés (16 sur 18) pour le FeLV/FIV étaient négatifs. À l'examen dermatologique, une alopecie multifocale, un érythème, des croûtes et des squames adhérentes grasses étaient observées. L'examen cytologique a montré une prolifération de *Malassezia* spp. Avec/sans infection bactérienne, sur la face ($n = 11$), le cou ventral ($n = 6$), l'abdomen ($n = 6$), les conduits auditifs ($n = 4$), le menton ($n = 2$), les pavillons auriculaires ($n = 2$), la zone interdigitée ($n = 1$) et les espaces périunguéaux ($n = 1$). En outre, pour deux chats, des *Malassezia pachydermatis* ont été isolées par culture fongique. Un traitement avec un azolé seul a été prescrit dans 7 cas, une association d'azolé et d'antibiotique dans 8 cas et un azolé avec un antibiotique et un anti-inflammatoire dans 3 cas. Après 3–4 semaines de traitement, une diminution marquée du prurit et des lésions a été observée pour les 11 chats traités par une association, et pour 5 des 7 chats traités avec seulement un azolé ... la dermatite à *Malassezia* spp. Peut représenter un problème secondaire chez les chats allergiques, en particulier pour ceux présentés avec des squames adhérentes marron et grasses. La bonne réponse au traitement antifongique utilisé seul suggère, comme chez le chien, que *Malassezia* spp. Est peut être responsable de lésions cutanées et de prurit chez le chat allergique.

Resumen Se describe a continuación una serie de 18 gatos alérgicos con sobrecrecimiento multicéntrico de *Malassezia* spp.; se diagnosticó dermatitis atópica en 16 gatos, reacción adversa alimentaria en otro y uno fue sacrificado dos meses después del diagnóstico de sobrecrecimiento de *Malassezia*. Todos los gatos se presentaban por lo demás sanos, y en aquellos en que se estudiaron infecciones víricas (16 de 18) con FeLV/FIV todos fueron negativos. En el examen dermatológico se observaron alopecia multifocal, eritema, costras y escamas oleosas adherentes de color marrón con distribución variable en todos los gatos. El examen citológico demostró sobrecrecimiento de *Malassezia* spp. con/sin infección bacteriana en la piel de la cara ($n = 11$), parte ventral del cuello ($n = 6$), abdomen ($n = 6$), canal auditivo ($n = 4$), barbilla ($n = 2$), pabellón auditivo ($n = 2$), piel interdigital ($n = 1$) y pliegues de las garras ($n = 1$). Es más, en dos gatos se aisló *Malassezia pachydermatis* en cultivos de las zonas con lesiones. Se prescribió un tratamiento con azoles solamente en siete animales, azoles y antibacterianos en 8, y azoles con antibacteriano y antiinflamatorio en tres. Tras 3–4 semanas de tratamiento se observó una reducción sustancial en el prurito y las lesiones en los 11 gatos tratados con cualquiera de las dos combinaciones, y en 5 de 7 gatos tratados solamente con azoles. El sobrecrecimiento de *Malassezia* spp. puede representar un problema cutáneo secundario en gatos alérgicos, particularmente en aquellos que se presentan al examen dermatológico con descamación oleosa adherente de color marrón. La respuesta favorable al tratamiento antifúngico solo sugiere que, al igual que en perros, *Malassezia* spp. puede ser parcialmente responsable tanto del prurito como de las lesiones cutáneas en gatos alérgicos.

Zusammenfassung Eine Serie von 18 allergischen Katzen mit multifokaler *Malassezia* spp. Überwucherung wird beschrieben; bei 16 Katzen wurde atopische Dermatitis diagnostiziert, bei einer weiteren eine Futtermittelüberempfindlichkeit und eine Katze wurde 2 Monate nach der Diagnose der *Malassezia* Überwucherung eingeschläfert. Alle Katzen waren ansonsten gesund und diejenigen, die auf FeLV/FIV Infektionen getestet wurden (16 von 18) waren alle negativ. Bei der dermatologischen Untersuchung wurden multifokale Alopezie, Erythem, Krustenbildung und schmierige klebende bräunliche Schuppen in unterschiedlicher Verteilung auf allen Katzen gefunden. Die zytologische Untersuchung zeigte *Malassezia* spp. Überwucherung mit und ohne bakterieller Infektion in der Gesichtshaut ($n = 11$), ventral am Hals ($n = 6$), Bauch ($n = 6$), Ohrkanal ($n = 4$), Kinn ($n = 2$), Ohrmuschel ($n = 2$), interdigital ($n = 1$) und in der Haut des Krallenfalzes ($n = 1$). Außerdem wurde bei zwei Katzen *Malassezia pachydermatis* mittels Pilzkultur aus der veränderten Haut isoliert. Azol-Therapie alleine wurde bei 7 Katzen, Azol und antibakterielle Therapie bei 8 und Azole mit sowohl antibakterieller als auch entzündungshemmender Therapie bei drei der Katzen verschrieben. Nach 3–4 wöchiger Therapie wurde eine deutliche Reduktion des Juckreizes und der Hautveränderungen bei allen 11 Katzen festgestellt, die mit der kombinierten Therapie behandelt worden waren und bei 5 der 7 Katzen, die ausschließlich mit Azolen behandelt worden waren. *Malassezia* spp. Überwucherung könnte ein sekundäres Hautproblem bei allergischen Katzen darstellen, vor allem bei jenen, die zur dermatologischen Untersuchung mit schmierigen klebenden bräunlichen Schuppen vorgestellt werden. Die günstige Antwort auf die Behandlung mit ausschließlich antimykotischen Medikamenten weist darauf hin, dass *Malassezia* spp., wie bei Hunden, teilweise für den Juckreiz wie auch die Hautveränderungen bei allergischen Katzen verantwortlich sein kann.