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# Psychogenic alopecia in cats: 11 cases (1993–1996)

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**Objective**—To determine signalment, history, clinical signs, and response to treatment of cats with psychogenic alopecia (PA) and to identify factors associated with its onset and propagation.

**Design**—Retrospective study.

**Animals**—11 cats.

**Procedure**—A survey was used to obtain information about breed, sex, age at time of weaning, frequency and duration of licking bouts, age at time of onset of PA, situations eliciting licking bouts, results of diagnostic tests, treatment, response to treatment, and current status of the cats. Additional information was obtained from medical records and by telephone conversations with owners and attending veterinarians.

**Results**—Four cats were purebred, and 7 were domestic shorthair. Six were female, and 5 were male; all were neutered. Eight cats were kept exclusively indoors. Age at time of onset of PA ranged from 6 months to 12 years. Environmental stresses initiated or exacerbated PA in 9 cats. Various methods were used to confirm the diagnosis, including therapeutic trials with antidepressant and anxiolytic drugs in 10 cats. All 5 cats treated with clomipramine, 2 of 3 treated with amitriptyline, and 1 of 4 treated with buspirone responded positively. Only 3 cats were still receiving medication at the time of this study; none of those 3 groomed excessively while receiving medication. Psychogenic alopecia resolved in 6 cats after drug treatment, environmental modification, or both. Psychogenic alopecia continued to be a problem in the remaining 2 cats.

**Clinical Implications**—Environmental stress may initiate or exacerbate PA in cats. Drug treatment, environmental modification, or both may be useful in treatment of affected cats. (*J Am Vet Med Assoc* 1999;214:71–74)

In cats, psychogenic alopecia (PA) involves depilation and sometimes excoriation secondary to excessive, inappropriate grooming, licking, chewing, and hair pulling.<sup>1</sup> Healthy cats typically spend a great part of each day grooming themselves,<sup>2,4</sup> and grooming is a common displacement behavior in cats. However, among cats susceptible to PA, environmental stresses (eg, a geographic move or sudden change in companionship or access to the outdoors) and various medical conditions and psychological states initiate or provoke inappropriate grooming behavior that is excessive, out of context, and leads to depilation and alopecia.

Individual case reports and clinical trials have helped to define characteristics of PA in cats.<sup>3,6</sup> In addition,

it has been suggested that cats of the oriental breeds (ie, Siamese, Abyssinians, Burmese, and Himalayans) are more susceptible to PA because of their high-strung, nervous temperaments.<sup>7,8</sup> Psychogenic alopecia in cats has many characteristics in common with obsessive-compulsive disorders in people,<sup>9</sup> particularly trichotillomania<sup>10,11</sup>; however, common clinical signs and methods for diagnosis of PA in cats have not been reported. The purpose of the study reported here was to determine signalment, history, clinical signs, and response to treatment of cats with PA and to identify factors associated with its onset and propagation.

## Criteria for Selection of Cases

Medical records of the Foster Small Animal Hospital at the Tufts University School of Veterinary Medicine were searched to identify cats in which PA had been diagnosed. Participation was also solicited via a handout at the Cat Fanciers Cat Show in Sturbridge, Mass and via a posting on the *Cat Fanciers Digest* on the Internet. Psychogenic alopecia was briefly described in the handout and posting, and owners of cats exhibiting such behavior were encouraged to respond. However, cats were only included in the study if PA had been diagnosed by a veterinarian.

## Procedures

Owners who expressed a willingness to participate in the study were sent a survey designed to solicit information about breed, sex, age at time of weaning, frequency and duration of grooming bouts, age at time of onset of PA, situations that elicited excessive grooming behavior, treatment, response to treatment, and current status of the cats. Once surveys were returned, medical records of cats considered for inclusion in the study were obtained and examined to determine results of diagnostic tests, treatment, and response to treatment. When responses were unclear or when further information was needed, owners and veterinarians were contacted directly.

## Results

Surveys were sent to 21 individuals, and 18 of the 21 surveys were completed and returned. Evaluation of survey responses and medical records indicated that 11 cats had been determined to have PA by a veterinarian and, thus, were eligible for inclusion in this study.

**Signalment**—Four cats were purebred (2 Oriental Shorthairs, 1 Siamese, and 1 Abyssinian) and 7 were domestic shorthair (DSH). Six were female, and 5 were male. All 11 cats were neutered; 10 had been neutered prior to onset of PA. Three cats, all of which were DSH, had been weaned prior to 4 weeks of age. Owners

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described their cats as calm ( $n = 5$ ), outgoing (5), timid (3), excitable (3), or anxious (1); 6 owners described their cats as fitting into more than 1 category.

**History**—Ten cats engaged in excessive grooming on a daily basis, and 4 of the 10 groomed hourly. The remaining cat pulled at its hair only on a weekly basis, but nevertheless had noticeable alopecia. Duration of grooming bouts ranged from a few seconds to several hours. Two cats reportedly groomed for seconds at a time, 3 groomed for minutes, and 3 groomed for hours or constantly (continuously attending to 1 or more spots located all over the body); owners of 3 cats did not know the duration of licking bouts. Frequency of licking bouts was not obviously related to their duration. Owners estimated that cats spent between 5 and 50% of their active time grooming.

All 11 cats had depilation. Areas of the body most commonly affected included the abdomen ( $n = 8$ ), flanks (4), back (4), and thorax (4); in 7 cats, multiple sites were affected. Five cats groomed so excessively that they caused excoriation in addition to depilation.

Age of cats at time of onset of PA ranged from 6 months to 12 years. Four cats (2 oriental breeds and 2 DSH) developed PA before they were 1 year old. One of the DSH that developed PA at 6 months of age had been found separated from its mother at 2 weeks of age. Two of 3 cats weaned prior to 4 weeks of age developed PA before they were 1 year old.

Owners of 9 cats indicated that PA in their cats had been initiated by environmental stresses. In all 4 cats that developed PA before 1 year of age, the condition was initiated by environmental stresses (separation from owner,  $n = 3$ ; moving to a new house, 1). Of the 7 cats that developed PA after 1 year of age (mean age at time of onset, 8.8 years; range, 3 to 12 years), 5 developed the condition after exposure to environmental stresses (animal companion died, 3; new pet introduced to the household, 1; formerly outdoor cat denied access to the outdoors, 1). Owners of the remaining 2 cats could not identify any particular event associated with onset of PA. One owner indicated that restricting the cat's access to the outdoors, especially during the winter months, exacerbated the cat's excessive grooming. Eight cats were kept indoors exclusively.

**Results of diagnostic tests**—For all cats, a variety of diagnostic tests were performed to establish the diagnosis of PA. For all cats, a detailed history, including onset and development of the condition and any changes in the behavior pattern over time, was obtained. All cats were originally brought to a veterinarian because of alopecia; 1 cat reportedly also appeared to be pruritic. In all cats, a thorough physical examination was performed to assess symmetry of the alopecia, appearance of depilated areas, and integrity of the epidermis, as well as to check for ectoparasites. In 4 cats, hairs around depilated areas reportedly appeared to be bitten or stubbled.

Six cats had been treated with methylprednisolone acetate (14 to 20 mg, SC, 1 dose given once or q 4 wk for 12 weeks), 1 had been treated with prednisone (5 mg, PO, q 12 h for 5 weeks), and 1 had been treated

with a combination of methylprednisolone acetate and prednisone. Owners of all 7 cats reported that excessive grooming continued during and after treatment with corticosteroids and that cats remained alopecic. In 5 cats, skin scrapings were examined for external parasites, but results were negative for all 5. Samples from 5 cats were submitted for dermatophyte culture. Results were positive for 1 cat, and the cat was treated with griseofulvin; however, the cat continued to groom excessively and remained alopecic even after dermatophytosis had completely resolved and results of follow-up cultures were negative. In 2 cats, a Wood's light was used to check for dermatophytes, but results were negative for both cats. Serum thyroid hormone concentrations were measured in 4 cats and were within reference limits for all 4. Results of CBC and serum biochemical tests performed on 5 cats were within reference limits. Eight-week dietary trials were performed on 2 cats to rule out food allergies, but owners of both cats reported neither a decrease in excessive grooming nor regrowth of hair. One cat was treated with ivermectin (0.9 and 1.8 mg, SC) on 2 separate occasions, but the owner reported no noticeable change in grooming behavior after treatment.

**Treatment and response**—One cat was not treated with antidepressant or anxiolytic drugs even though such treatment was recommended by the attending veterinarian, and the cat continued to groom excessively and remained alopecic. The remaining 10 cats were all treated with antidepressant or anxiolytic drugs. Two were treated with clomipramine<sup>a</sup> alone, 2 were treated with buspirone alone, 3 were treated with amitriptyline alone, 2 were treated with buspirone and then with clomipramine when treatment with buspirone was unsuccessful, and 1 was treated with sertraline and then with clomipramine when treatment with sertraline was unsuccessful.

Owners of all 5 cats that were treated with clomipramine indicated that frequency of licking bouts decreased and hair regrew while the cat was receiving the medication. Dosage of clomipramine ranged from 1.25 to 2.5 mg, PO, every 24 hours, and was adjusted on the basis of response to treatment. For 4 cats, the dosage was gradually decreased until administration was discontinued altogether. Duration of treatment with clomipramine for these 4 cats ranged from 30 days to 6 months (mean, 3.6 months). In the remaining cat, frequency of grooming increased and alopecia recurred when dosage was decreased to < 1.25 mg, PO, every 3 days, and the cat had been receiving clomipramine continuously for 27 months at the time of this study. Owners of 3 of the 5 cats treated with clomipramine altered their cats' environment to reduce environmental stress. One cat was removed from a cattery and show environment and placed in a pet home; the new owner has not reported any problems. Another cat was allowed to be around its owners at all times, because the owners were retired. The third cat was allowed more access to the outdoors. In those 3 cats, excessive grooming did not return when treatment with clomipramine was discontinued. The other cat in which clomipramine treatment was discontinued

returned to grooming excessively as the dosage of clomipramine was reduced, but the owner indicated that frequency of licking bouts was not as high and alopecia was not as severe as they were prior to treatment. All 5 owners indicated that their cats did not appear to like the taste of clomipramine.

Owners of 2 of the 3 cats treated with amitriptyline reported that frequency of licking bouts and intensity of excessive grooming were reduced while the cats were receiving the medication. The owner of the remaining cat reported no reduction. The 2 cats that responded positively to amitriptyline treatment had been receiving the medication on a daily basis for 17 months (2.5 mg, PO, q 24 h) and 27 months (5 mg, PO, q 12 h) at the time of this study. Both owners reported that if the dosage of amitriptyline was reduced or if administration was discontinued, excessive grooming and alopecia recurred. The cat that did not respond to amitriptyline treatment had received 5 mg of amitriptyline once daily for 30 days. After failure of amitriptyline treatment, the owner altered the cat's environment to help the cat adjust to the addition of a new cat to the home (ie, by keeping the cats in separate rooms while the owner was not present to monitor their interactions). Once the cats had adjusted to each other, the older cat stopped grooming excessively.

Three of the 4 cats treated with buspirone (5 mg, PO, q 12 h) for 20 to 28 days did not respond to treatment. Frequency of excessive grooming decreased in the remaining cat, and the dosage of buspirone was reduced to 1.25 mg, PO, every 12 hours over 2 months. When treatment was discontinued, however, frequency of licking bouts and areas of alopecia increased, so treatment was reinstated at a dosage of 2.5 mg, PO, every 12 hours for 2 more months. The dosage was gradually decreased again over a 2-month period. While the cat was being treated with buspirone, the owner moved to a new house. When buspirone treatment was discontinued the second time, the cat did not return to grooming excessively or develop areas of alopecia.

The owner of the cat treated with sertraline (dosage and duration not recorded by the veterinarian) reported no decrease in the cat's excessive grooming during treatment.

Presently, 2 cats continue to groom excessively and do not receive medication. Three cats are receiving amitriptyline (n = 2) or clomipramine (1) on a continuous basis and do not groom excessively unless the dosage of medication is reduced. Psychogenic alopecia resolved in the remaining 6 cats after pharmacologic treatment and environment modification (n = 5) or after environmental modification alone (1).

## Discussion

Given that oriental breeds of cats (Siamese, Abyssinian, Burmese, and Oriental) comprised only 7,463 of 59.1 million cats (0.013%) in the United States in 1996,<sup>12</sup> the fact that 4 of the 11 cats in this study were oriental breeds supports the suggestion that PA is more prevalent in oriental breeds.<sup>1,3,8</sup> Some of the DSH in this study may have also had oriental breeding in their backgrounds. Therefore, the statement that only

4 of 11 cats were oriental breeds may underestimate the percentage of cats with PA that have oriental breeding.

Three of 7 DSH in this study had been weaned before 4 weeks of age, suggesting that among DSH, early weaning may predispose cats to developing PA. However, a larger sample is needed to explore this relationship. Environmental stresses appeared to play a role in the development of PA in the cats in this study. Eight cats had severely limited or no access to the outdoors, and 2 owners attributed onset or exacerbation of PA to restricted access to the outdoors. Overall, a stressful event or change in environment was associated with onset of PA in 9 of the 11 cats in this study, supporting current theories about causes of PA.<sup>1,8,13</sup> Although 2 owners could not attribute a particular event to the onset of PA in their cats, stress, previous skin disease, or trauma could have been the initiating event. In cats with PA, excessive grooming may continue even after the initial trigger is no longer present, apparently becoming self-reinforcing. Such reinforcement is thought to result from endorphin production associated with chronic stress.<sup>6</sup>

The diagnosis of PA is made by excluding all other possible causes of alopecia in affected cats. The extensive list of rule-outs normally includes dermatophytosis, demodicosis, atopy, food or flea bite hypersensitivity, and endocrine alopecia.<sup>1</sup> Veterinarians treating cats in this study considered various combinations of these rule-outs before making a diagnosis of PA, but each of the rule-outs was not considered by every veterinarian. Various rule-outs were included or excluded and various diagnostic tests were performed on the basis of the cat's history and results of the veterinarian's physical examination. A diagnosis of PA may be made prematurely if other causes of alopecia are not ruled out. Although diagnostic tests are expensive and time-consuming, there is enough similarity between PA and other causes of alopecia to warrant a thorough diagnostic evaluation.

The one diagnostic method suggested by attending veterinarians for all 11 cats in the study was a therapeutic trial with an antidepressant (clomipramine, amitriptyline) or anxiolytic (buspirone) drug. Of the 3 drugs tried, buspirone appeared to have been the least effective; however, this could have been a result of the short time the drug was administered (20 to 28 days). Treatment for 4 weeks is generally needed for the effects of buspirone treatment to be observed. The only cat that had a positive response to buspirone treatment was treated for 4 months.

Although psychotropic drugs were reported to help relieve excessive grooming in 8 cats in this study (5 treated with clomipramine, 2 with amitriptyline, and 1 with buspirone), this was too small a number of cats on which to base drug recommendations. If a large enough population of cats with PA can be found, formal psychotropic drug trials should be conducted to help discern which drugs and dosages are most efficacious for treatment of PA.

For 5 of the 8 cats that appeared to have a positive response to medication, environment modifications were made in combination with drug treatment, and excessive grooming did not recur when the medication

was withdrawn. These results support the clinical impression that potential stressors in the cat's environment must be eliminated for PA to resolve.<sup>1,7,8</sup> If environmental stresses cannot be eliminated, the cat may have to be maintained on antidepressants continuously, as was the case for 3 cats in this study.

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\*Anafranil, Novartis, Sandimmune Summit, NJ.

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## References

1. Muller GH, Kirk RW, Scott DW. *Small animal dermatology*. Philadelphia: WB Saunders Co, 1989;854–857.
2. Hart BL. Feline behavior: the role of grooming activity. *Fel Pract* 1976;6:14–16.
3. Young MS, Manning TO. Psychogenic dermatoses. *Derm Rep* 1984;3(2):1–8.
4. Beaver BV. Canine and feline grooming behaviors. *Vet Med Small Anim Clin* 1982;77:713–715.
5. Beaver BV, Barton C. Animal behavior case of the month. *J Am Vet Med Assoc* 1993;203:651–652.
6. Willemse T, Spruijt BM, van Osterwyck A. Feline psychogenic alopecia and the role of the opioid system. In: von Tscherner C, Halliwell REW, eds. *Advances in veterinary dermatology*. London: Bailliere Tindall, 1990;195–198.
7. Scott DW. Feline dermatology 1900–1978: a monograph. *J Am Anim Hosp Assoc* 1980;16:331–562.
8. Scott DW. The skin. In: Holzworth J, ed. *Diseases of the cat: medicine and surgery*. Philadelphia: WB Saunders Co, 1987; 619–675.
9. Dodman NH, Moon-Fanelli AA, Mertens PA, et al. Veterinary models of OCD. In: Hollander E, Stein DJ, eds. *Obsessive-compulsive disorders*. New York: Marcel Dekkar, 1997;99–143.
10. Moon-Fanelli AA, Dodman NH, O'Sullivan RL. Veterinary models of compulsive self-grooming: parallels with trichotillomania. In: Christenson GA, Stein DJ, eds. *Trichotillomania*. Washington, DC: American Psychiatric Association Press, 1998/1999;in press.
11. Swedo SE, Leonard HL. Trichotillomania: an obsessive compulsive spectrum disorder. *Psych Clin North Am* 1992;15:777–790.
12. Center for Information Management. *U.S. Pet Ownership & Demographics Sourcebook*. Schaumburg, IL: American Veterinary Medical Association, 1997;1–39.
13. O'Dair HA, Foster AP. Focal and generalized alopecia. *Vet Clin North Am Small Anim Pract* 1995;25:767–1013.