

Animal Behavior Case of the Month

This feature is sponsored by the American College of Veterinary Behaviorists. Readers of the *JAVMA* are invited to submit reports, which should include a brief description of a behavioral problem, the evaluation and treatment, and succinct discussion of the case.

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Statement of the Problem

A cat was examined because of persistent vomiting of food and gastric fluid about 5 times a week for the previous 16 months. The problem was reported to occur during feeding, in the evening, or overnight. Most often, the cat vomited near where it was fed.

Signalment

The cat was a 20-month-old castrated male seal point Siamese weighing 4.2 kg (9.2 lb).

History

The cat lived with a female littermate in a detached house with a large garden belonging to a young married couple without any children. There was no history of any fighting or other obvious behavioral problems between the cats. The cat was reported to seldom go outside. It was referred for investigation of a potential behavioral cause for the vomiting at the request of the owner, following extensive physical examinations and laboratory testing. These tests included radiographic assessment of gastric emptying, blood biochemical and hematologic assessment, and stomach and small intestinal biopsy. Results of this testing did not suggest a cause for the cat's vomiting. The only important finding was a high serum folate concentration (28 nmol/L; reference range, 9 to 25 nmol/L) with a normal vitamin B₁₂ concentration (150 pmol/L). Results of tests for FeLV antigen and feline immunodeficiency virus antibody were negative. Urination and defecation behaviors were normal. A tentative diagnosis of bacterial overgrowth had been made, and the cat had been treated with metronidazole. After 3 weeks of treatment, there had been no change in the behavior.

Prior to examination at the behavior clinic, the cat had been dewormed with fenbendazole at least 4 times, started on a regimen of being fed several small meals consisting of various foods, fed various hypoallergenic diets, and treated with ampicillin, cephalexin, oxytetracycline, and neomycin with kaolin for between 7 and 20 days. Metoclopramide had also been administered orally and parenterally without any substantial

improvement. The referring veterinarian reported that the cat had never vomited while hospitalized for diagnostic evaluation. The owners had stopped administration of all medications at least 1 week prior to examination at the behavior clinic.

Both owners worked during the week, and vomiting was less common during the weekends. The owners admitted to being disturbed by the behavior, even though the cat was not undersized or underweight. When they witnessed the behavior, they would clean up the area immediately with a proprietary multipurpose cleaner and try to console the cat. The owners had tried a variety of diets but always fed the cats together. They had tried feeding the cats in various places around the house but settled on the kitchen as the floor was easier to clean here.

The cat was trained to urinate and defecate in a litter box, had never been seen to urine mark, and regularly used the scratch post provided by the owner. It was reported to enjoy being groomed and handled.

Although the owner did not believe that there were any other behavior problems, the cats did play chase, with the patient more frequently being the one pursued. The patient also occasionally chewed some of the houseplants.

Physical Examination Findings and Laboratory Results

At the time of consultation, the cat did not voluntarily leave its basket during the first hour of the interview but was persistently vocal during this time. The owners reported that such vocalization was typical, but the cat was very affectionate and often sought their attention when they were home. While in the basket, the cat appeared tense and nervous, as it remained crouched with its tail between its legs and its ears flattened for most of the time. However, once removed from the basket for physical examination, the cat voluntarily remained on the female owner's lap for the rest of the consultation (approx 1 hour) and appeared relaxed. No physical abnormalities were apparent, and no further laboratory tests were performed.

Diagnosis

In the absence of any other discernible causes of the vomiting, the cat was treated empirically for a form of attention-reinforced vomiting.

Treatment

Initial treatment consisted of a program of extinction combined with controlled delivery of attention as a reinforcement for other behaviors. The owners were asked to keep a detailed diary of the behavior. Extinction involved ignoring any vomiting behavior, and the owners were instructed that if the cat should vomit in their presence, they were to clean the area only after the cat was no longer in the kitchen (where

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feeding and vomiting occurred). The owners were warned that the behavior could become more frequent or violent in the early stages of treatment but to persist as this may be an indication that extinction was beginning to take effect.

At the same time, the owners were encouraged to play several times each evening with each cat individually, using toys such as catnip mice and pieces of string to "hunt." Play sessions only needed to last a few minutes but could occur simultaneously in different rooms if both of the owners were free. The cats were currently fed a commercial dry food ad libitum, and the owners were instructed that the cats should no longer have free access to food. Instead, a single small meal was to be provided individually for each cat in the closed kitchen, away from its conspecific. Neither owner was to be present after the food had been put down for the cat, but any food remaining after half an hour was removed. Some of each cat's daily ration was to be fed by hand and used as a reward during simple training exercises and games (eg, it was to be placed inside toys that were used during play sessions).

This initial trial period was scheduled to last 3 to 4 weeks. After this time, the cat's progress was to be reviewed, and the use of psychopharmaceutical drugs would be considered if progress had not been made.

Follow-up

The owners phoned after 2 weeks to report that the cat had not vomited in the previous 7 days, and they were delighted with the response. After a further 2 months, the cat had vomited on only 1 occasion.

Discussion

A range of psychogenic disorders in cats has been reported, including psychogenic anorexia,¹ psychogenic dermatoses,² and psychogenic vomiting.³ However, there are no documented cases of the latter condition in cats, and the term is often used when a physical organic cause cannot be found, or the condition is thought to be stress related.⁴ A thorough medical assessment is, therefore, an essential component of the diagnostic process. The World Health Organization considers psychogenic vomiting in humans to be a form of nonnauseous vomiting associated with other psychological disturbances.⁵ The most common psychological disturbances associated with psychogenic vomiting in people are affective⁶ and dissociative (conversion) disorders,⁷ and patients with these disorders are often faced with seemingly insoluble problems.⁸ Although there were circumstantial similarities between the condition of the cat described in the present report and the condition of human patients with

affective or dissociative disorders, it was not possible to determine the subjective feelings of the cat; therefore, it was not possible to distinguish between psychogenic vomiting as described for humans and an attention-related problem. If part of the underlying problem in this cat was associated with the presence and behavior of the other cat in the household, the patient may also have faced a seemingly insoluble problem. The treatment program, therefore, was designed to help with these forms of psychogenic vomiting. Separation of the cats at feeding and at times of play may have helped to resolve problems of proximity. Increasing play may also have provided a suitable enrichment, which resulted in a reduced tendency for the cats to chase each other. Being pursued may again have been stressful for the patient. Play has also been recommended as a form of cognitive therapy for the treatment of a variety of affective disorders in dogs.⁹

One other cause to be considered in cats with chronic vomiting for which a systemic cause cannot be identified is the potential effect of high intracranial pressure.⁸ The response to treatment in the cat described in the present report would appear to exclude this cause. However, over a period of 10 years, the author has encountered 4 other cats with superficially similar signs for which no physical cause was apparent. These were all Siamese cats with onset of signs at 4 months of age in 3 and at 1 year of age in the other. All failed to respond significantly to any medical, surgical, or behavioral treatment.

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