



This case report demonstrates the successful use of PURINA® PRO PLAN® VETERINARY DIETS Feline EN St/Ox Gastrointestinal in the management of irritable bowel syndrome in a young cat.

Dietary management of irritable bowel syndrome in a young adult cat

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Background

Nestor lived in an apartment, but had access outdoors and frequently fought with, and was often bitten by, other cats in the neighbourhood. He was the only cat in the apartment, and his owner described him as being fearful and emotional, and reported that he often came rushing indoors after a fight with another cat and promptly had diarrhoea.

Nestor had been wormed with milbemycin oxime and also fenbendazole (50mg/kg daily for 5 days), but no improvement in the diarrhoea had been seen. Nestor had also been put on monthly topical ('spot on') antiparasitic treatment (Advantage®).

Following a bout of cystitis associated with struvite crystalluria, he had been placed on a dry acidifying diet (Hills c/d®) by the veterinary surgeon who had been caring for him at the time.

Clinical examination

On clinical examination, Nestor was alert but anxious, and had a rectal temperature of 39.6°C. He had recently been bitten on the right front leg and had developed a localised infection as a result of this which was accompanied by erythema and pruritus. He was in good body condition but had easily irritated skin. There was an area of alopecia and inflammation in the interscapular region where he had been licking constantly following a previous subcutaneous injection, and both pinnae were also very erythematous.

Differential diagnosis

Some important considerations for the recurrent diarrhoea Nestor presented with include:

- Gastrointestinal parasites. Although many would have been controlled by the broad-spectrum worming regime Nestor had received, this would not necessarily exclude their presence or the presence of parasites such as *Tritrichomonas foetus*, which would not respond to routine prophylaxis.

- Dietary allergy or dietary sensitivity
- Partial gastrointestinal obstruction
- Bacterial overgrowth
- Inflammatory bowel disease
- Irritable bowel syndrome
- Stress-related diarrhoea
- Intestinal neoplasia (e.g. lymphoma)
- Hypocobalaminemia (hypovitaminosis B12)

Therapy

Nestor was placed on a 6-day course of doxycycline to control the cat-bite associated cellulitis. Following discussions with the owner, rather than undertake further investigations of the diarrhoea at that stage it was decided that the possibility of dietary sensitivity should be investigated by placing Nestor on a controlled dry diet, namely PURINA® PRO PLAN® VETERINARY DIETS Feline EN St/Ox Gastrointestinal.

Over the subsequent 6 weeks, the owner was asked to note and evaluate the quality, quantity and frequency of faeces passed each day. At the time Nestor started the feeding trial, his faecal score was 7 on the PURINA scoring system i.e. liquid diarrhoea, with an increase in both volume and frequency of faeces. On average, he passed motions three times a day – an abnormally increased frequency suggesting disease affecting the large intestine.

At the first clinical check-up following feeding of Feline EN St/Ox Gastrointestinal for 3 weeks, Nestor showed a marked improvement in his diarrhoea, with a reduction in frequency of defaecation (down to once to twice daily) and an improved average faecal score of 5 (very moist but with a distinct shape). The owner reported that there was still a problem with recurrent diarrhoea after cat fights though. The dermatitis on the forearm remained static, with a moderate pruritus but no breakage of the skin surface.


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At the second check after 6 weeks therapy, Nestor's weight remained relatively stable (+100g), with a further sustained improvement in the average faecal score (score 4, moist but with distinct log shape), and similar frequency of defaecation (once to twice daily, i.e. normal). However, the cat still urgently needed to pass faeces after a fight or threat from another cat. This resulted in a faecal score of 7 one day and the cat having a poor demeanour on some days. Nestor's coat had improved and become very shiny, but the skin on his forearm remained very mildly erythematous.



Discussion

Nestor's clinical improvement and response to nutritional management alone at the end of the first 3 weeks demonstrated that an appropriate diet enabled an optimal digestive function, thereby reducing the frequency of defaecation and ensuring faeces of normal consistency.

Nestor's case appeared to have a strong emotional/stress component with the recurrent diarrhoea after episodes of conflict. Although the diet did not abolish the acute response to episodes of conflict, it nevertheless provided a sustained and large improvement in digestive function and faecal quality and ensured a rapid return to normality on the few occasions where there was recurrent diarrhoea.

Irritable bowel syndrome has been described in the cat as well as humans. Studies have shown that in vulnerable individuals (those susceptible to stress) the inflammatory response and production of cytokines in the gastrointestinal tract is much greater than in other individuals. The passage of faeces, in addition to urgent defaecation, is controlled by the autonomic nervous system, which in turn is affected by these inflammatory mediators.

Intestinal tract diseases can also compromise the metabolism of vitamin B12 in some cats. Recalcitrant diarrhoea associated with low serum B12 concentrations is now well described in cats, and in such cases it appears the diarrhoea may not resolve until the affected cats are specifically supplemented with vitamin B12. This should be differentiated from exocrine pancreatic insufficiency, which can also cause hypcobalaminemia, but is much rarer.

Conclusion

The use of dietary control as a starting point for therapy in cases of large intestinal diarrhoea is vital. Attention to the quality of the nutrients, their digestibility, and the incorporation of additional nutrients such as soluble and insoluble fibres in susceptible cats can help limit chronic inflammation and reactivity of the digestive tract. The use of PURINA® PRO PLAN® VETERINARY DIETS Feline EN Sr/Ox Gastrointestinal offers an easy therapeutic approach for the owner. It is carefully formulated to support the specific physiological mechanisms involved in feline digestion and intestinal tract structure function, which can often be restored and managed without the need for medication, immunomodulators or anti-inflammatories, all of which have common side effects in cats.



Further Reading

1. Thompson KA, Parnell NK, Hohenhaus AE, Moore GE, Rondeau MP(2009) Feline exocrine pancreatic insufficiency: 16 cases (1992–2007), *Journal of Feline Medicine and Surgery*, 11 (12), 935–940.
2. Jergens AE, Crandall JM. (2006): Clinical staging of inflammatory bowel disease. In, August, JR (Ed), *Consultations in Feline Internal Medicine*, vol 5. Elsevier, St. Louis, MO., pp 127.
3. Johns A. (2001): Inflammatory bowel diseases In: *Feline Internal Medicine Secrets*, Lappin, M., Hanley & Belfus pub, 107–113.

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