Proceedings of the 36th World Small Animal Veterinary Congress
WSAVA

Oct. 14 - 17, 2011
Jeju, Korea

Next Congress:

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MANAGEMENT OF FELINE INFLAMMATORY BOWEL DISEASE AND INTESTINAL NEOPLASIA

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Definitions

Inflammatory bowel disease (IBD) is a common condition in cats. Inflammation can affect any part of the bowel, and the inflammation is typically lymphocytic-plasmacytic. Vomiting and decreased appetite are the most common clinical signs in cats, with weight loss and diarrhoea also relatively common. Severe cases may also develop hypoproteinaemia, and associated fluid accumulation. The major differentials for IBD include dietary sensitivity (and there is a large overlap between this and IBD), alimentary neoplasia, hyperthyroidism, renal disease, hepatic disease and pancreatitis. The syndrome of ‘triaditis’ where 2 or more of IBD, cholangioepatitis and pancreatitis coexist is well described1.

The GI tract is now the most common anatomical location for lymphoma in cats2. The two recognised forms of GI lymphoma include small cell (lymphocytic) lymphoma which is well differentiated and has a more benign course3,4; and large cell (lymphoblastic) lymphoma which is poorly differentiated and often develops a mass lesion and involves other abdominal organs. Large granular lymphoma (LGL) is a sub-type of lymphoblastic lymphoma where the T lymphocytes possess intracytoplasmic granules, and has a grave prognosis5. Small cell lymphoma is the main differential diagnosis for IBD, as clinical signs are very similar. The site predisposition for small cell lymphoma is the distal small bowel6, particularly the ileum, and so diagnosis may be missed if this section is not biopsied. There is significant overlap histologically between IBD and small cell lymphoma as well.

Adenocarcinoma of the GI tract is rare in cats, but has been reported. When it does occur cats present with significant weight loss, anaemia and haematemesis7.

Management

As cobalamin is absorbed in the ileum of cats, it is not surprising that cats with both IBD and lymphoma are likely to have cobalamin deficiency. It has been shown that cobalamin supplementation improves clinical signs in cats with GI disease regardless of the underlying cause8. It is advisable to measure serum cobalamin if feasible, but if not then the empirical dosage is 250 µg by injection once weekly for four weeks.
IBD

Prior to treatment for IBD, cats should be fully evaluated to ensure there are no concurrent diseases such as diabetes mellitus or hyperthyroidism that may interfere with treatment or account for the clinical signs.

Dietary modification is very important in cats with chronic GI disease, and even more so if there is concurrent pruritis, as there is an increased index of suspicion for food sensitivity. In one study, 50% of cats with chronic GI disease were food responsive, with a substantial sub-set of them not relapsing when re-challenged with their previous diet. Even cats with severe clinical signs may respond to dietary treatment alone, and so this should be the first step in targeted treatment. Response to diets typically occurs within 1-2 weeks. Diets generally consist of hydrolysed or novel protein sources, are gluten-free and will contain a moderate amount of soluble fibre.

If cats are not dietary responsive and there is a confirmed diagnosis of IBD, then either antibiotic therapy or immune suppression can be started. Generally, if there is a partial response to diet, or suggestion of pancreatic involvement I will try antibiotic therapy first, again hoping for a response within 2-3 weeks. Antibiotics that have been reported to be useful in cats include metronidazole (at 10 mg/kg bid for maximum 3 weeks) and amoxicillin (if concurrent biliary duct disease).

Prednisolone is usually started at 1-3 mg/kg daily, and this dosage is to be tapered every 3-4 weeks once clinical response has been attained. Clinical signs of iatrogenic hyperadrenocorticism are less common in cats than in dogs, but the diabetogenic potential of glucocorticoids should be kept in mind should weight loss or PU/PD develop. Dietary therapy should ideally be given in conjunction with this. In cats with concurrent cardiac disease, or severe GI signs, dexamethasone (at about 1/6-1/8th the dosage of oral prednisolone can be administered subcutaneously. Alternative forms of glucocorticoids, such as budesonide which is absorbed locally and has fewer systemic effects, have not been critically evaluated in cats.

If after dietary modification and treatment with glucocorticoids and cobalamin there is still a poor response, the initial diagnosis should be reviewed. If intestinal biopsies have not been obtained previously, then they should be strongly encouraged at this point in time. If additional immune suppression is required, or there is a desire to withdraw the glucocorticoids, chlorambucil remains the additional immune suppressive drug of choice in cats at present. Although theoretically ciclosporin may be beneficial, there is no evaluation of comparative efficacy between the two drugs.

New directions

The use of probiotics, or ‘beneficial’ bacteria is under evaluation in a number of people with IBD, and this shows mixed results. Probiotics have been shown to be well tolerated in cats, but the benefit in cats with IBD has not been determined. Supplementation of omega-3 polyunsaturated fatty acids is also advocated by some authors to theoretically reduce inflammation in the intestine. The current extrapolated dosage is 17-25 mg/kg/day of EPA and 8-18 mg/kg/day of DHA, but this may cause diarrhoea, and if added to the food cause palatability issues.

Small cell lymphoma

Response to therapy for small cell lymphoma is approximately 75-90%, with most cats alive longer than 2 years, when they are treated with a combination of prednisolone and chlorambucil. Prednisolone is generally started at 3 mg/kg once daily, and reduced to 1-2 mg/kg/day once clinical remission is attained. There is no universally accepted preference for giving chlorambucil as either a bolus dose or alternate-day dosing intervals.
Bolus dosing has the advantage of less owner exposure, but clinical superiority is not known. Reported dosages for chlorambucil include:

- 2 mg every 2 days
- 15 mg/m² once daily for 4 days every 3 weeks
- 20 mg/m² every 2 weeks (rounded to nearest 2 mg tablet size)

As response to this therapy is generally very good and of a prolonged duration rescue protocols are not well described, but both radiation and cyclophosphamide may be of potential benefit1.

Large cell (lymphoblastic or LGL) lymphoma has a poorer prognosis, with a 50-60% response rate. Median survival times with multi-agent chemotherapy protocols for the lymphoblastic form is reported to be approximately 6-7 months10, whilst for LGL it is only 57 days5. Almost half of the cats that have a complete response to therapy will live longer than 1 year. The chemotherapy protocols are generally CHOP (cyclophosphamide, doxorubicin, vincristine) based, with or without the addition of L-asparaginase. Single agent therapy does not appear to be beneficial, but lomustine in one study did appear to well tolerated and of comparable efficacy to multi-agent protocols11.

Radiation therapy may also be helpful at prolonging survival if available, and appears to be well tolerated in cats12. In some instances, if there is a mass lesion causing obstruction surgical resection is necessary. Surgical resection alone does not confer prolonged survival benefit. In addition to multi-agent chemotherapy, cats with lymphoblastic or LGL lymphoma are typically very unwell. They often require supportive therapy including fluid support, antibiotics and enteral nutrition. As discussed earlier for IBD, cobalamin supplementation and dietary modification are also beneficial for cats with all forms of GI lymphoma.

**Adenocarcinoma**

The prognosis for GI adenocarcinoma remains grave in cats, and usually by the time of diagnosis the lesion is not able to be surgically resected. Treatment is generally palliative, and aims to reduce gastric acidity, as well as providing analgesia and nutritional support.

**References**