Lymphangiectasia: Dietary Fat Matters

Protein-losing enteropathy (PLE) is a class of gastrointestinal disorders characterized by protein loss resulting in hypoalbuminemia and subsequent effects. Intestinal lymphangiectasia (IL) is a particular type of PLE that involves dilation of lymphatic vessels within the GI tract. IL is typically a secondary disorder that develops in patients with inflammatory bowel disease (IBD), lymphoma, infectious disease, or increased venous pressure at the level of the thoracic duct caused by right-sided heart failure, pericarditis, or pericardial effusion. Clinical signs include vomiting, diarrhea, weight loss, and ascites. Laboratory abnormalities may include hypoalbuminemia, panhypoproteinemia, lymphopenia, hypocalcemia, and hypercholesterolemia. Biopsy is required for definitive diagnosis. Treatment often involves use of specialized diets and immunosuppressive therapy in the form of steroids. This study evaluated the use of an ultra-low-fat (ULF) cooked diet (ie, skinless white potatoes, chicken breast) in a general protocol that included metronidazole and prednisolone, with or without a balanced dry prescription low-fat (LF) diet. Patients were scored based on attitude, activity, appetite, vomiting, fecal consistency, weight loss, albumin concentration, ascites and/or peripheral edema, and pruritus.

In the study, 19 of 24 dogs responded to either the ULF or ULF + LF diet as part of PLE treatment; clinical signs improved and levels of albumin, total protein, and blood urea nitrogen increased after 1 month. After 2 months, albumin levels were significantly greater in the ULF group as compared with the ULF + LF group. Prednisolone doses could be decreased or stopped in these dogs.

Commentary
Diet importance and role in disease is emphasized in this study, although patients were treated in a multimodal fashion—it was not diet alone that produced successful outcomes. One study feature is the importance of impressing on clients the difference between a nutritionally balanced home-cooked diet (the chicken breast and white potato recipe in this study was not balanced) versus a balanced commercial diet and the disadvantages of long-term use of an imbalanced diet. A balanced home-cooked ultra-low-fat formulation can only be obtained from a board-certified veterinary nutritionist for use in a case of IL. It is also important to consult a nutritionist if the patient has concurrent metabolic derangements that would require detailed manipulation of essential nutrients.—Heather Troyer, DVM, DABVP, CVA

Source

FOCUS

RESEARCH NOTE: Evaluating New Drugs for FIV Treatment

Treatment of cats infected with feline immunodeficiency virus (FIV) consists primarily of supportive care and management of secondary illness. Human patients with HIV have been treated successfully with a combination of drugs from different classes, including nucleoside reverse transcriptase inhibitors (NRTIs). This study assessed 3 NRTIs not previously evaluated in feline cell lines (ie, amdoxovir, racivir, dexelvucitabine) and compared results with 6 other NRTIs either previously used in FIV-treated cats or for which previous data existed (ie, abacavir, didanosine, emtricitabine, lamivudine, stavudine, zidovudine). Peripheral blood mononuclear (PBM) cells were harvested from 3 specific pathogen–free cats and were infected with a pathogenic molecular clone of FIV; these cells were used to determine cytotoxic effects and efficacy of the NRTIs. At a concentration of 500 µM, both didanosine and amdoxovir were significantly less cytotoxic than abacavir, although all 9 drugs had cytotoxic effects at that concentration. At noncytotoxic concentrations (<10 µM), emtricitabine, didanosine, and lamivudine were the most effective viral inhibitors; dexelvucitabine was weakest, but not significantly so. These results indicate that although amdoxovir, racivir, and dexelvucitabine have cytotoxic profiles acceptable enough to warrant further investigation as treatment options in FIV-infected cats, they do not appear to be superior to existing NRTIs in reducing viral burden. It is important to note, however, that reduction of viral load is not the only benefit of NRTI use, as zidovudine has been shown to improve stomatitis, neurologic signs, and overall condition scores of FIV-infected cats.

Source
Antiviral efficacy of nine nucleoside reverse transcriptase inhibitors against feline immunodeficiency virus in feline peripheral blood mononuclear cells. Schwartz AM, McCrackin MA, Schinazi RF; et al. AM J VET RES 75:273-281, 2014.