

Area of research: Cardiology/nutrition  
Mentor: Dr. Lisa Freeman  
Project description:

Nutrition can play an important role in the management of patients with cardiac disease. Diet is involved in the pathogenesis of certain cardiac diseases [e.g., taurine deficiency-induced dilated cardiomyopathy (DCM)] and changes in nutritional status are often found in animals with cardiac disease. Nutritional alterations in cats with cardiac disease can include anorexia; cardiac cachexia; altered sodium, chloride and potassium excretion; and nutrient deficiencies. These alterations are often secondary to the disease and its treatment but may be caused by diet, concurrent conditions, or pre-existing nutritional problems (e.g., obesity). Anorexia is a common problem in cardiac disease and has been reported to occur in 34-84% of dogs with congestive heart failure (CHF). The prevalence of anorexia in cats with cardiac disease is not known but is important information because anorexia also can contribute to the owner's decision of euthanasia. In dogs, anorexia has been shown to be a contributing factor in the decision of euthanasia in the 68% of dogs with CHF.

Nutritional modulation has the potential to play a powerful role in cardiac disease by slowing progression of cardiac disease and improving quality of life. Nutritional modifications suggested for the management of cardiac disease have included sodium restriction, caloric supplementation, and administration of dietary supplements (e.g., taurine, L-carnitine, coenzyme Q10, n-3 polyunsaturated fatty acids). To prove benefits of these and other forms of nutritional modulation in cats, randomized, double-blind, placebo-controlled studies are needed. One of the difficulties with these studies however, is that the usual dietary patterns of cats with cardiac disease are not known. For example, dietary patterns may change when cats are initially diagnosed with cardiac disease or may change with increasing severity of disease. In addition, knowledge of the extent of use of treats and nutritional supplements is important for designing nutritional studies and for dietary modification. For example, in a study of dogs with cardiac disease, 92% received treats and table food and 31% received dietary supplements.

The purpose of the proposed study for Summer, 2006 is to determine the dietary patterns and prevalence of anorexia in cats with cardiac disease and to assess nutrient intake for cats with cardiac disease. This will involve identifying eligible cats from the hospital's cardiology database, calling cat owners to administer a 24-hour food recall, calculating nutrient intake for each cat, analyzing the data, and incorporating the results in a manuscript for publication.