Utilization of Feeding Tubes in the Management of Feline Chronic Kidney Disease

Sheri Ross, DVM, PhD

KEYWORDS

• Esophagostomy feeding tubes • Feline chronic kidney disease • Nutrition

KEY POINTS

- Esophagostomy feeding tubes are useful, and in many cases essential, for the comprehensive management of cats with moderate to advanced chronic kidney disease.
- Often disregarded as a long-term management option, feeding tubes should more appropriately be considered a lifelong therapeutic appliance to facilitate the global management of cats with CKD thus providing improved therapeutic efficacy and quality-of-life.
- Esophagostomy tubes facilitate the maintenance of adequate hydration, avoiding episodes of hospitalization for diuresis and hypertension associated with parenteral salt-containing hydration strategies.

The long-term use of esophagostomy feeding tubes provides the means to maintain hydration, maintain adequate nutrition, and facilitate medication administration in patients with chronic kidney disease (CKD). Many clinicians are reluctant to regard enteral feeding tubes as a long-term solution for the nutritional, hydration, and medical management of chronically ill patients, especially those with CKD. Feline patients with CKD often have a protracted disease course with a progressive decline in body condition that may lead to comorbid conditions and eventually euthanasia because of a perceived decline in quality-of-life by the owner. Proactive use of esophagostomy feeding tubes, can prevent this decline in body condition and facilitate the administration of medications and maintenance of hydration, thus increasing owner and patient compliance and minimizing episodes of hospitalization. These tubes are easily placed in a primary care clinic and consistently extend the quantity and, most importantly, the quality-of-life for patients with CKD.

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Department of Hemodialysis/Nephrology/Urology, University of California Veterinary Medical Center – San Diego, 10435 Sorrento Valley Road, Suite 101, San Diego, CA 92121, USA
E-mail address: sro@ucdavis.edu

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APPROPRIATE NUTRITION IS CRITICAL IN THE MANAGEMENT OF CHRONIC KIDNEY DISEASE

Dietary therapy is an extremely important component in the management of patients with CKD. Proper nutrition may forestall many of the complications associated with advancing renal disease and has been shown to improve the patient's quality and quantity-of-life.[1,2] Compared with adult maintenance diets, the diets formulated specifically for patients with CKD typically have the following nutritional features: (1) reduced protein, phosphorus, and sodium content; (2) increased potassium and B-vitamin content; (3) increased caloric density; (4) a neutral effect on acid-base balance; and (5) an increased omega-3/omega-6 polyunsaturated fatty acid ratio. Currently there is grade I evidence supporting the recommendation that cats with serum creatinine concentrations in excess of 2.0 mg/dL (International Renal Interest Society [IRIS] CKD stages mid-2 through 4) be fed a diet formulated specifically for kidney disease.[1] Similar results were observed in an earlier, nonrandomized clinical trial in cats with naturally occurring CKD, where the median survival time for cats consuming the renal diet was 633 days compared with 264 days for cats that did not transition to a renal diet.[3]

MALNUTRITION IN PATIENTS WITH CHRONIC KIDNEY DISEASE

Hyporexia secondary to CKD is encountered most commonly in the later stages of the disease, but may occur at any point in the course of progressive CKD. There are many metabolic and husbandry factors that contribute to decreased food intake (**Box 1**). Dehydration, anemia, hypokalemia, and acidemia are examples of common metabolic derangements that may contribute to a decrease in appetite in the later stages of CKD. Many of these metabolic derangements may be corrected or improved with

Box 1
Factors contributing to anorexia in feline chronic kidney disease

Metabolic

Uremic stimulation of vomiting center

Hypokalemia

Dehydration

Mineral and bone disorder

Metabolic acidosis

Anemia

Uremic gastritis

Hyperphosphatemia

Food and Feeding

Altered taste/smell

Forced feeding

Sudden diet changes

Medication intolerance

Food aversion

Oral lesions/dental disease