VETERINARY MEDICINE TODAY

What Is Your Diagnosis?

Figure 1—Right lateral radiographic view of the abdomen of a cat evaluated for anorexia and tenesmus of 4 days’ duration.

**History**

A 12-year-old 2.2-kg (4.8-lb) spayed female Siamese cat was examined because of anorexia of 4 days’ duration and nonproductive fecal or urinary tenesmus. Physical examination revealed severe dehydration (7 to 10%), and a large, elongated, nodular structure in the middle portion of the abdomen on the left side. Results of CBC and serum biochemical analyses, including serum thyroxine, were within reference ranges. Results of a combined test for FeLV and FIV were negative. Radiographs of the abdomen were obtained (Fig 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page.

This report was submitted by Carla H. Gardner, DVM; Sherri L. Hicks, DVM; John R. Puette, DVM; and Susan E. Bunch, DVM, PhD, DACVIM; from Brigadoon Animal Hospital, 1074 Cedar Point Blvd, Swansboro, NC 28584 (Gardner, Hicks, Puette); and the Department of Clinical Sciences, College of Veterinary Medicine, North Carolina State University, Raleigh, NC 27606 (Bunch).

Address correspondence to Dr. Gardner.
Diagnosis

Radiographic diagnosis—Multiple radiopaque foreign bodies in a gas- and fluid-filled tubular viscus (Fig 2).

Comments

Exploratory surgery revealed 2 annular constrictive lesions in the ileum; each lesion was 2 cm long and 5 cm apart. An 8-cm segment of jejunum proximal to the lesions was dilated to 3 cm in diameter (diameter of the unaffected jejunum was 1 cm) and contained 63 mineralized ovoid masses with a mean length of 1 cm. Intestinal adenocarcinoma was suspected.

Because most intestinal neoplasms are malignant, and we believed that 1 of the lesions was a mural metastatic site, a grave prognosis was given. The owner chose euthanasia. Intestinal adenocarcinoma was confirmed in both lesions by histologic examination. The interior of each mineralized mass was composed of hair, and the exterior shell was 80% organic material, 15% calcium, and 5% quartz.

The cat’s signalment and clinical course were typical of adenocarcinoma. Ranking behind lymphoma, adenocarcinoma is the most common neoplasm involving the feline gastrointestinal tract and accounts for 25 to 30% of all gastrointestinal neoplasms. Adenocarcinoma usually affects older cats (ages 8 to 11 years), and Siamese cats are 8 times as likely to develop adenocarcinoma, compared with other breeds. The most common sites for adenocarcinoma are the ileum, jejunum, and, less frequently, the ileocecal region.

Intestinal adenocarcinoma forms when malignant glandular epithelial cells from the crypts of Lieberkuhn spread intramurally, causing segmental thickening, annular constrictions, stenosis, and partial or complete intestinal obstruction. In cats, growth within the intestinal wall or into the lumen is common and may not be palpable. Metastasis to the peritoneum, mesentery, omentum, or regional lymph nodes has usually occurred by the time of diagnosis and indicates a poor prognosis. Mean postoperative survival time for cats with intestinal adenocarcinoma and metastasis is 5 months.

The treatment of choice for intestinal adenocarcinoma is resection and anastomosis. Resection of adjacent mesentery and local lymphatics is also recommended. Use of doxurubicin after surgery appears to benefit cats with colonic adenocarcinoma, but chemotherapy has not proved helpful for cats with small intestinal adenocarcinoma.

Perhaps the most unique feature of the cat in this report was the finding of mineralized trichobezoars in the dilated segment of jejunum proximal to the neoplasms. We believe that hair (swallowed during grooming) was unable to pass through the narrowed intestine, accumulated, and became a nidus for calcium, organic material, and quartz to form a smooth shell. The slowly progressive course of neoplastic transformation enabled this unusual cascade of events to occur repeatedly, resulting in formation of numerous, small, mineralized trichobezoars.