What Is Your Diagnosis?

History

A 1-year-old sexually intact female domestic rabbit was examined because of intermittent diarrhea and for what the owners described as a grunting sound of 3 days’ duration. The rabbit’s diet consisted of pellets, vegetables, and timothy hay, with raisins as treats. The owners had not noticed a change in the rabbit’s appetite or activity level and were confident that the intermittent soft feces they were seeing were not cecotrophs. The rabbit had free roam of the owners’ house and was known to chew on household objects, including carpeting.

During physical examination, the rabbit was responsive and active but an occasional sneeze was observed. The abdomen felt mildly distended on palpation. No parasites or ova were seen on direct and floatation examinations of a fecal specimen. The owners declined sedation for radiography, and because of the uncooperative nature of the rabbit, only the dorsoventral radiographic view of the body was of diagnostic quality (Figure 1).

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

Figure 1—Dorsoventral radiographic view of the abdomen and caudal portion of the thorax of a 1-year-old sexually intact female domestic rabbit evaluated for intermittent diarrhea and a grunting sound of 3 days’ duration.

In cooperation with

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Abdominal radiography failed to reveal any conclusive abdominal abnormalities. There is a lack of contrast within the abdomen, but no obstruction or foreign bodies were identified. In the limited view of the caudal portion of the thorax, there appears to be a mass in the right caudal lung lobe. The cardiac shadow is obscured, suggesting pleural effusion. Because of the possible abnormalities noticed in the limited view of the thorax, the owners were advised that it would be necessary to sedate the rabbit to obtain additional thoracic views. Two days later, the owners reported that the rabbit had been normal at home and that the diarrhea had resolved; however, they consented to additional testing. Lateral and dorsoventral radiographic views of the thorax (Figure 2) were obtained after sedation was induced by administration of midazolam (1 mg/kg [0.45 mg/lb], IM). A single large (3.7 × 3.2-cm), well-circumscribed soft tissue opacity is in the right caudal lung lobe. The cardiac silhouette is indistinct, which may be attributable to a small amount of free pleural fluid or a large amount of fat within the thoracic cavity. Differential diagnoses for the pulmonary mass included an abscess, granuloma, primary or metastatic neoplasia, or a parasitic cyst.

The following day, an ultrasound-guided fine-needle aspirate of the mass was obtained after the rabbit was anesthetized (Figure 3). The mass is hypoechoic and has a thick, hyperechoic wall. Some echogenic flocculent material is in the center, consistent with an abscess. Cytologic examination of the aspirate revealed only necrotic debris and was nondiagnostic; however, Pasteurella sp was isolated. Because it was unlikely that antimicrobials would be effective in resolving the abscess, thoracotomy was recommended for lobar resection. Treatment was declined by the owners.

**Comments**

Twenty days later, the rabbit was returned for evaluation. Upper airway stertor was auscultable over the frontal sinuses. Treatment was initiated with enrofloxacin (6 mg/kg [2.7 mg/lb], PO, q 12 h), but the rabbit’s appetite decreased substantially while on oral medication, so treatment was stopped after only 3 days. The rabbit’s appetite returned to normal, and its clinical signs resolved after several days. At approximately 1 month after initial examination, the rabbit appeared clinically normal.

*Pasteurella multocida* infections are considered common in rabbits and frequently occur in the respiratory tract. Although a single, walled-off abscess is not unusual, the incidental finding of this abscess in a rabbit with no referable clinical signs was unusual.

During the rabbit’s initial evaluation, the owners declined to allow sedation. The rabbit resisted proper positioning, which resulted in poor-quality radiographs and required the owners to return the rabbit for a second visit. Some owners of exotic pets may be reluctant to allow sedation for diagnostic procedures because of safety or financial concerns. However, sedating a nervous patient can result in more valuable diagnostics with less patient stress and may save the client money in the long term because poor-quality diagnostics may have to be repeated at additional cost.