

What is Your Diagnosis?

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Signalment

A twelve-year-old, spayed female, mixed breed dog.

History

The patient was admitted to the Small Animal Teaching Hospital, Chulalongkorn University due to the chief complaints of progressively abdominal enlargement during the last 3 months. Besides, the patient was losing in body weight due to the decreased appetite and showed the clinical sign of dysuria.

Clinical examination

The patient was slightly depressed and

panting whereas the other clinical signs e.g., dehydration condition, mucus membrane, heart rate, and heart and lung sound were in normal limit. The hematology and serum biochemistry including of hepatic and renal function tests were also in normal limit.

Radiographic examination

According to the chief complaints about the abdomen, the patient was subjected to investigate intra-abdominal organs by abdominal radiographs, both of the ventrodorsal and lateral positions. As the result of the complicated lesions at the caudal abdomen, the patient was subsequently performed the computed tomographic examination for further information.

What is your diagnosis?
Please turn to next page for the answer.

Radiographic findings

On the lateral radiograph of the abdomen, a tremendous, calcified soft tissue density mass (10.0 x 6.6 cm) was found at the mid-caudal abdomen which the mass caused the cranial displacement of small bowel and the ventral displacement of descending colon and rectum (arrow; Fig 1). Besides, there was evidence of osteolytic lesions extending from the body of the 7th lumbar vertebrae to the cranial part of the 1st coccygeal vertebrae including the wing of ilium

(asterisk; Fig 1). On the ventrodorsal radiograph, the calcified soft tissue mass was suspected to locate at the right mid-caudal abdomen (asterisk) whereas the contralateral area showed the distended bladder (arrow; Fig 2). In addition to the radiographic signs, the caudal obstruction of the urinary system that induced right hydroureter and hydronephrosis (arrow), peritoneal fluid (asterisk) and the intravasation tumor emboli at the caudal abdominal vena cava were detected on the contrast enhanced computed tomography (arrows; Figs 3a-3c).

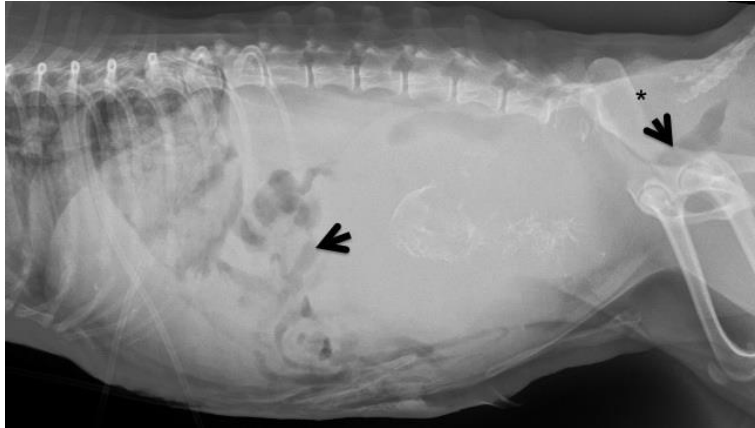
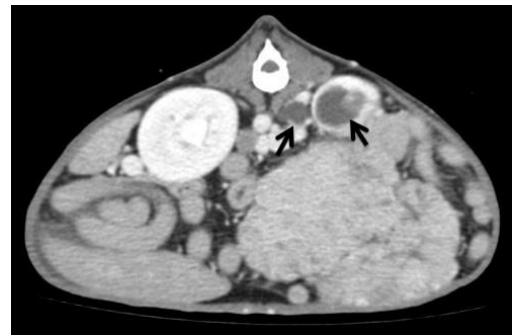


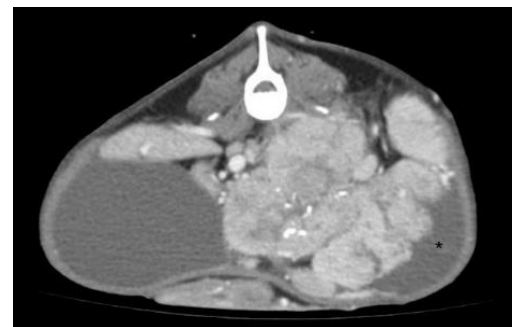
Figure 1 Lateral projection of the abdominal radiograph revealed a tremendous, calcified soft tissue density mass at the mid-caudal abdomen, which caused the cranial displacement of the small bowel and ventral displacement of the colon and rectum (arrow). In addition, there was evidence of the osteolytic lesions at the caudal abdominal vertebral column, which included the body of the 7th lumbar spine, sacrum, the 1st caudal vertebral column, and right iliac wing (asterisk).



Figure 2 On the ventrodorsal projection, the calcified soft tissue mass was suspected to locate on the right caudal abdomen (asterisk) whereas the left side was the distended bladder (arrow).



a



b



c

Figure 3 Contrasted enhanced-abdominal computed tomography revealed that calcified abdominal mass caused the urinary tract obstruction by the signs of the distended bladder, right hydroureter and right hydronephrosis (arrow; a). Besides, a small amount of peritoneal fluid (asterisk; b) and tumorigenic emboli (arrow; c) were detected at the caudal abdomen.

Radiographic diagnosis

Calcified sublumbar mass (apocrine adenocarcinoma).

Discussion

Apocrine tumor is consisted of neoplastic cells that arisen from the anal sac epithelium. This tumor is account for 17% of the perianal tumors in dogs (North and Banks, 2009). The behavior of apocrine tumor is usually aggressive including the paraneoplastic syndrome of hypercalcemia. Furthermore, apocrine tumor usually invades into the adjacent soft tissue and bone structure that latter has seen on the lateral abdominal radiograph in this patient. Although the abdominal radiographs could easily reveal the bone lesions, the soft tissue lesions were hardly detected due to the equal radio opacity of the tumor mass to other abdominal organs. In advanced diseases as seen in this

patient that the tumor mass caused the urinary tract obstruction and intravasation tumorigenic emboli, other imaging modalities could be preference than radiography. Presently, contrast enhanced computed tomographic examination is increasing to apply in veterinary medicine. This technique was not only enhanced the sensitivity to detect the clinical lesions, but computed tomographic could aid for the treatment direction and prognosis (Schwarz and Saunders, 2011)

Reference

- North S and Banks T 2009. Tumours of gastrointestinal tract and associated structures. In: Introduction to Small Animal Oncology 1sted S North and T Banks (eds) Philadelphia: Saunders Elsevier 129-143
- Schwarz T and Saunders J 2011. Veterinary Computed Tomography. 1sted T Schwarz and J Saunder (eds) Ames: Wiley-Blackwell 557pp.