



What's New at Imaging Center for Animals

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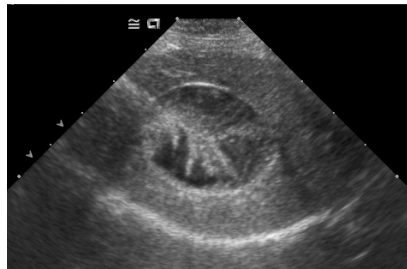
**ICA offers Imaging Services 5 days a week from
8:00AM to 5:00PM.**

The Team at **ICA** brings you information and updates about different imaging studies in veterinary medicine.

GALL BLADDER MUCOCELE

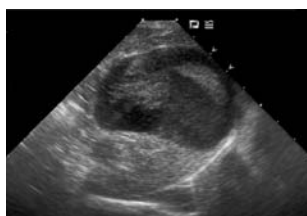
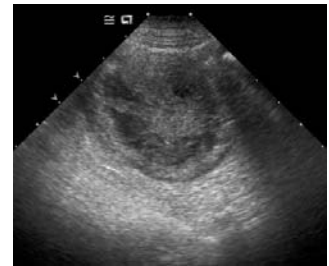
A gallbladder (GB) mucocele is an abnormal accumulation of mucus distending the gall bladder. The etiology is controversial: it may be the result of chronic inflammation and/or bile stasis secondary to biliary obstruction. GB mucocele is associated with mucinous hyperplasia of the GB mucosa which results in increased mucin production and/or fluid resorption. The bile becomes inspissated reducing the bile flow into and out of the GB. Large amount of inspissated bile in the GB may eventually lead to pressure necrosis of the wall and ultimately to GB wall rupture. Altered contraction of the GB wall from ischemia may also play a role in the process.

Mucoceles commonly develop in aged, small-breed dogs. Although a mucocele can be an incidental finding, most dogs are lethargic and anorexic; less commonly, they may present with signs of abdominal pain, icterus, hyperthermia, and vomiting. The biochemistry analysis may show evidence of hepatobiliary disease including hyperbilirubinemia, and/or increased ALT, ALP, and GGT.

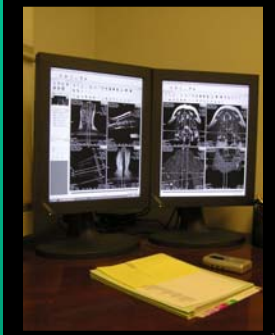


On abdominal sonography, a mucocele appears as a GB filled with immobile echogenic fluid and hyperechoic internal features including intraluminal membranes, linear striations or stellate pattern. It is important to distinguish mucocele from biliary sludge; lack of gravitational dependency of bile within mucoceles is the primary feature differentiating mucoceles

from biliary sludge. High resolution ultrasound equipment may be necessary for early detection of the striations of the finely striated pattern. Biliary duct distention is not necessarily present with biliary obstruction secondary to mucoceles. GB wall thickness and appearance are variable and nonspecific; cystic and/or common bile duct diameters could be normal and this does not rule out biliary obstruction.



In the presence of a distended GB with an immobile sonographic stellate or finely striated bile pattern, a surgical treatment (cholecystectomy or cholecystojejunostomy) is recommended when clinical or biochemical signs of biliary disease are present. Clinical studies have identified GB necrosis in close to 80% of the dogs and loss of GB wall integrity and/or rupture in 50% of the dogs with mucocele. Medical treatment and patient monitoring by follow-up sonographic examinations may be considered when the patient does not present any clinical or biochemical abnormalities.



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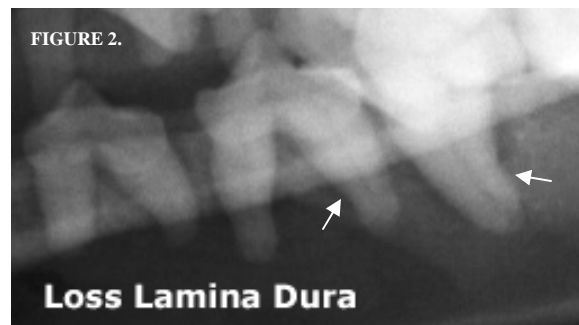
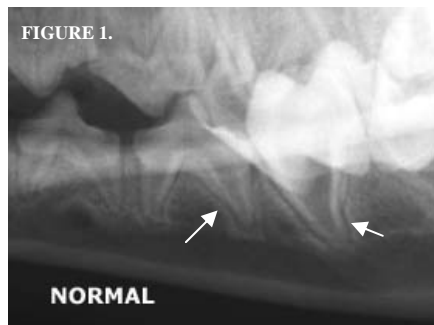
Heather Coughlin
coordinator

Renal Secondary Hyperparathyroidism

Renal secondary hyperparathyroidism and renal osteodystrophy are well-documented effects of chronic renal disease. It occurs in association with hyperphosphatemia, low circulating 1,25-dihydroxycholecalciferol (calcitriol) levels, reduced blood ionized calcium concentration, and skeletal resistance to the calcemic action of PTH. Bones of the skull and mandible are the most severely affected and may become so demineralized that the teeth become movable.

The radiographic signs include widening of the periodontal space with **loss of the lamina dura**, resorption of the alveolar crest, rounding of the amelocemental junction, and lysis of the bone surrounding the teeth. The loss of bone opacity/lysis around the teeth in hyperparathyroidism is more generalized and is not restricted to the periodontal area as in periodontal disease.

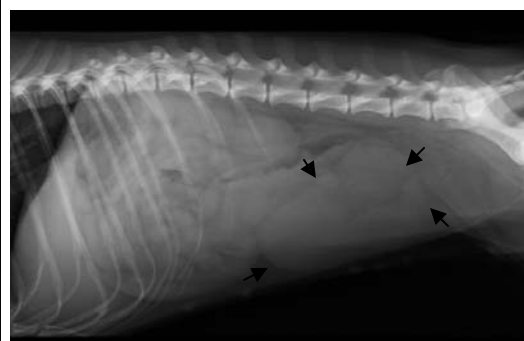
Figure 1. Normal lamina dura. **Figure 2.** Chronic renal disease in a 6 yr old, male neutered, Australian Shepherd with a BUN of 131 mg/dL and a creatinine of 10.8 mg/dL.



CASE OF THE WEEK



“Betty” female, 2yr old, Cavalier King Charles spaniel, presented for lethargy, anorexia. Temperature 103, HR=120/min, RR=24/mm, CRT=1.5sec. Vaginal discharge/ Abdominal radiographs showed a



distended tubular structure within the caudal abdomen, extending caudally between the colon and bladder neck. These findings are compatible with a **pyometra**. A sonographic evaluation of the abdomen confirmed the dilatation of the uterine horns with echogenic material.

Contact us for more information and to discuss different imaging procedures and studies for your patients.

We appreciate your referrals and confidence in our services.

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