

GI Radiographs

Survey abdominal radiography is used to evaluate the GI tract, but identifying the duodenum can be difficult unless it contains gas. Gas acts as a negative contrast agent outlining the mucosal and intraluminal portions of the GI tract.

Evaluation of the duodenum is important for diagnosing foreign body obstructions and pancreatitis. With pancreatitis, the duodenum may be laterally displaced or have abnormal gas distention, or there may be a widened pyloroduodenal angle.

The aim of this prospective randomized study was to evaluate any difference in duodenal gas when dogs are first placed in right lateral vs left lateral recumbency. Survey abdominal radiographs were taken of 100 dogs. Of these, 49 had a right lateral, then ventrodorsal, then left lateral view taken. The rest had a left lateral, then ventrodorsal, then right lateral view taken. Radiographs were evaluated for presence and distribution of gas throughout the duodenum and for presence of pseudoulcers (Peyer patches). Results suggested that luminal duodenal gas is

significantly more likely to appear and be well-distributed in radiographs when a left lateral view is taken first, followed by a ventrodorsal and then right lateral view. Peyer patches were seen in 11% of the dogs, more commonly when intraluminal gas was present. The authors recommended that an abdominal radiographic study begin with a left lateral view when the duodenum needs to be evaluated.

Commentary

Mechanical ileus resulting from gastroduodenal foreign bodies is not uncommon. Radiographic diagnosis of such conditions can be challenging because of the superimposition of normal structures and the lack of inherent contrast. For this reason, some academic institutions routinely perform left lateral and ventrodorsal views for improved

visualization of the pylorus and duodenum. The use of body positioning and naturally occurring negative contrast (ie, GI gas) does not require any special equipment or increase the cost of the procedure. It will necessitate a change in clinic practice, as most radiographs are currently obtained in right lateral recumbency. However, by adopting the radiographic approach to abdominal imaging as detailed in this article, busy practitioners can develop increased efficiency, confidence, and accuracy in ruling out gastroduodenal obstructions.—Ajay Sharma, BVSc, MVSc, DVM, DACVR

Source

Hart DV, Berry CR. Initial influence of right versus left lateral recumbency on the radiographic finding of duodenal gas on subsequent survey ventrodorsal projections of the canine abdomen. *Vet Radiol Ultrasound*. 2015;56(1):12-17.

Radiographic diagnosis of mechanical ileus resulting from duodenal foreign bodies can be challenging because of the superimposition of normal structures and the lack of inherent contrast.

Therapeutics Research Note: Ursodeoxycholic Acid

Ursodeoxycholic acid (UDCA) is used to treat hepatobiliary disease (eg, cholestatic, inflammatory, metabolic) and immune-mediated hepatopathies in dogs by stimulating choleresis, inhibiting apoptosis, and protecting cholangiocytes from the cytotoxic effects of bile acids. In this study, 20 healthy dogs received UDCA for 6 to 8 weeks. UDCA administration increased fasting serum bile acids above pretreatment values but typically not above the

reference range. Administration did not alter liver enzymes, bilirubin, cholesterol, or triglyceride levels. Hepatobiliary ultrasound examinations remained normal.

Source

Deitz KL, Makielski KM, Williams JM, Lin H, Morrison JA. Effect of 6-8 weeks of oral ursodeoxycholic acid administration on serum concentrations of fasting and postprandial bile acids and biochemical analytes in healthy dogs. *Vet Clin Pathol*. 2015;44(3):431-436.