

SONOGRAPHIC CRITERIA FOR THE DIAGNOSIS OF GASTROINTESTINAL OBSTRUCTION IN 39 DOGS AND CATS.

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Retrospective analysis was performed on sonograms in 39 cases of dogs and cats that were found to have gastrointestinal obstruction upon surgical laparotomy. The following sonographic parameters were analyzed;

- 1) Proximal luminal gastrointestinal dilation
- 2) Proximal gastrointestinal hyperperistalsis
- 3) Presence of a foreign object at the end of the dilation
- 4) Type of acoustic shadow at obstruction site
- 5) Empty post obstruction intestinal lumen

Small intestinal luminal dilation and shadowing was differentiated from colonic dilation and colonic “dirty shadow” by following the colon from the pelvic inlet cranially into the ileocecal valve in retrograde fashion. Obstructive pathology was found to largely be owing to foreign objects with variable degrees of acoustic shadowing with 2 exceptions that lacked shadowing by the foreign object. The degree of luminal dilatation varied greatly and was somewhat dependent on the physical character of the foreign object, primarily that of its absorptive capabilities such as that of a corn cob, fabric, or wood products. Some cases presented echogenic, ill-defined serosal inflammation and/or overt peritonitis in the region of obstruction. Some cases also presented with obstruction with concurrent ileus. Periserosal fat inflammation and loss of serosal detail was found to be consistent with inflammation noted at surgery and was used as an urgency factor during the sonogram to recommend imminent surgical intervention.

- 1) Proximal luminal gastrointestinal dilation was present in 39/39 cases.
- 2) Proximal gastrointestinal hyperperistalsis was present in 34/39 cases. The remaining 5 cases were determined to possess mechanical ileus owing to “exhausted bowel.”
- 3) An obstructive foreign object was discovered at surgery in 39/39 cases.
- 4) Acoustic shadowing was strongly present in 30 cases. Mild acoustic shadowing or “dirty shadow” similar to colonic content was present in 7 cases. Two cases did not present with an acoustic shadow on ultrasound.
- 5) Empty post obstruction intestinal lumen was definitively evident in 27/39 cases. Post obstruction fluid was present in 2 cases, and undecided in 10 cases.

From this study group of 39 cases, a consistent set of sonographic criteria for gastrointestinal obstruction can be utilized and combined with clinical signs and other testing in order to select medical versus surgical therapy for the patient presenting with gastrointestinal signs.