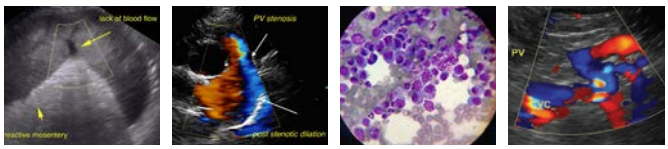
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Thermis Hupy

SPECIES
Canine

BREED
Chihuahua

SEX
Spayed Female

AGE
10 Years

WEIGHT
4.2 kg

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Brittany Gardner

HOSPITAL NAME
Wilvet Salem

REFERRING VET
Dr. Brittany Gardner

INVOICE
45498

DATE
2/25/23

PRESENTING CLINICAL SIGNS

Presented 2/24 for vomiting, acute anorexia and diarrhea/straining to defecate in the morning. Ingested bone on 2/21, radiographs showed no obstruction at that time and treated with supportive care. Was doing well till 2/24 when vomiting, diarrhea and decrease appetite started. Nasogastric tube.

Abnormal PE/Chem/CBC/UA Results: HCT 34 Chem 10 WNL, Lytes 4 WNL lungs clear, eupneic. ABD: tense on deep palpation. M/S: amb x 4 w/ no lameness. NEU: appropriate mentation.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (3.3 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Tiny non-obstructive nephroliths are noted.

The left kidney is normal in size (3.6 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Tiny non-obstructive nephroliths are noted.

Adrenal Glands

The right adrenal gland is normal in size (1.1 cm at the cranial pole and 0.50 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.27 cm at the cranial pole and 0.38 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

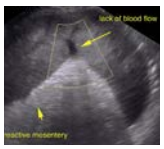
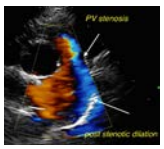
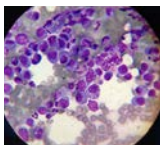
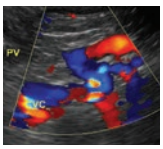
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Thermis Hupy

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.2 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Brittany Gardner

HOSPITAL NAME

Wilvet Salem

REFERRING VET

Dr. Brittany Gardner

INVOICE

45498

DATE

2/25/23

The visible stomach wall is normal in thickness and layering. The stomach is moderately distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. However, given the reported history of fasting, delayed gastric emptying could be considered. Soft (cloth) fluid absorbing foreign material is considered less likely but cannot be definitively ruled out. If clinical signs are consistent (vomiting, etc.), recommendations include supportive medical care, 24 hours fasting and re-image.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Full stomach** – This appears most consistent with normal ingesta, gas, potentially some bone fragments, but no definitive foreign material or obstruction. The bowel also appears post-prandial. Foreign gastric material can't be definitively ruled out but is considered less likely.

- **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

SECONDARY FINDINGS

- Urinary bladder debris

- Tiny non-obstructive bilateral nephroliths

- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Thermis Hupy

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.2 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Brittany Gardner

HOSPITAL NAME

Wilvet Salem

REFERRING VET

Dr. Brittany Gardner

INVOICE

45498

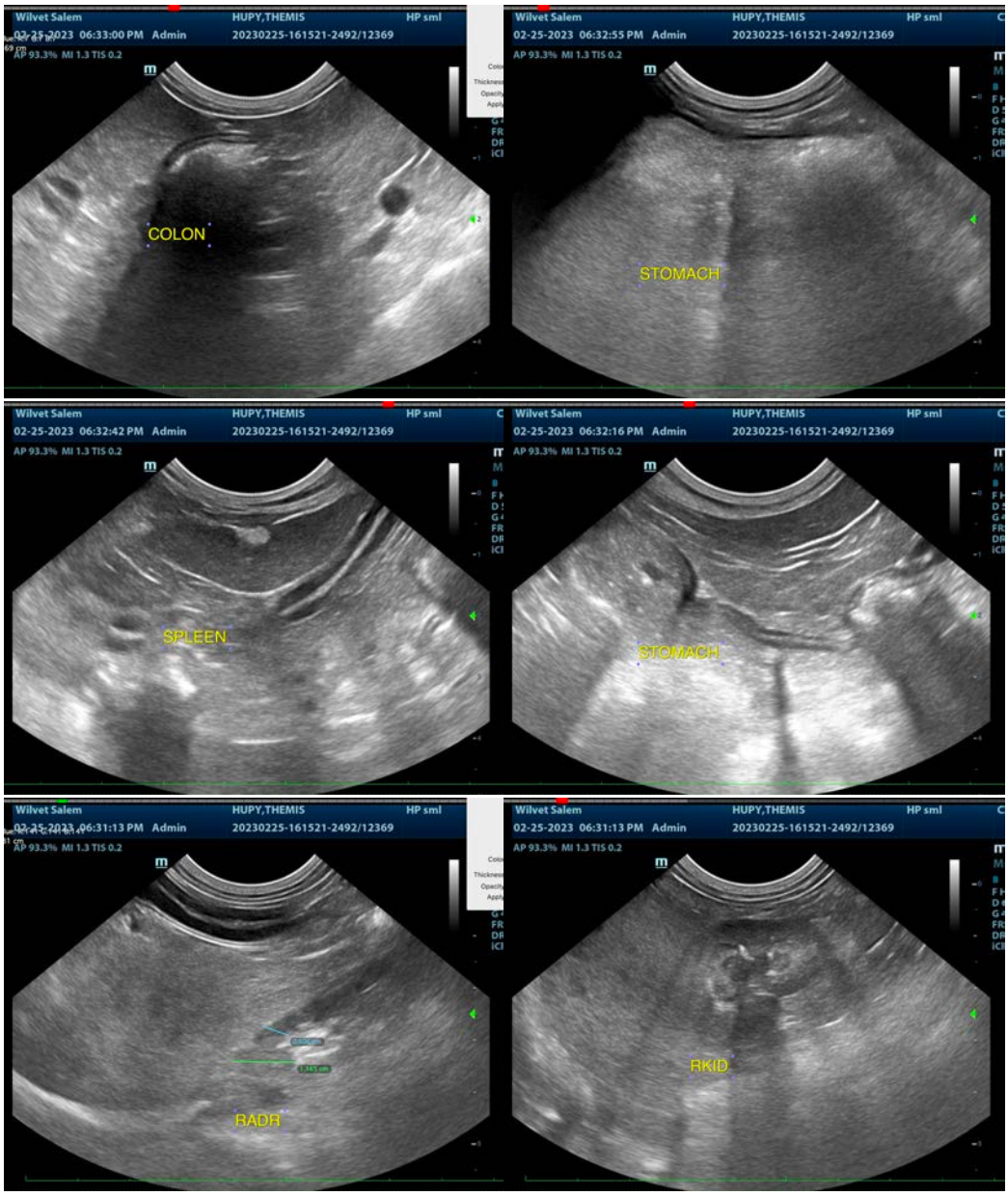
DATE

2/25/23

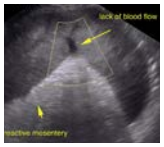
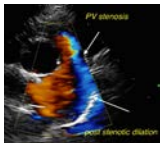
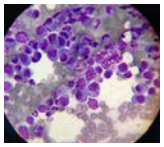
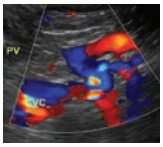
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommendations include continued supportive/symptomatic medical management of potential dietary indiscretion/gastroenteritis, potentially a result of the reported bone ingestion versus other for another 24+ hours, and then recheck fasted imaging of the stomach to help further differentiate normal ingesta versus potential delayed gastric outflow versus obstruction versus other. Recheck imaging may be warranted sooner if vomiting cannot be controlled medically.

If this patient does not have a foreign body and the gastrointestinal signs persist, additional diagnostic recommendations would include a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory followed by empirical deworming with a 5-day course of Panacur and potentially a transition in diet based on trial and error response.



SonoPath
Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Thermis Hupy

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.2 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Brittany Gardner

HOSPITAL NAME

Wilvet Salem

REFERRING VET

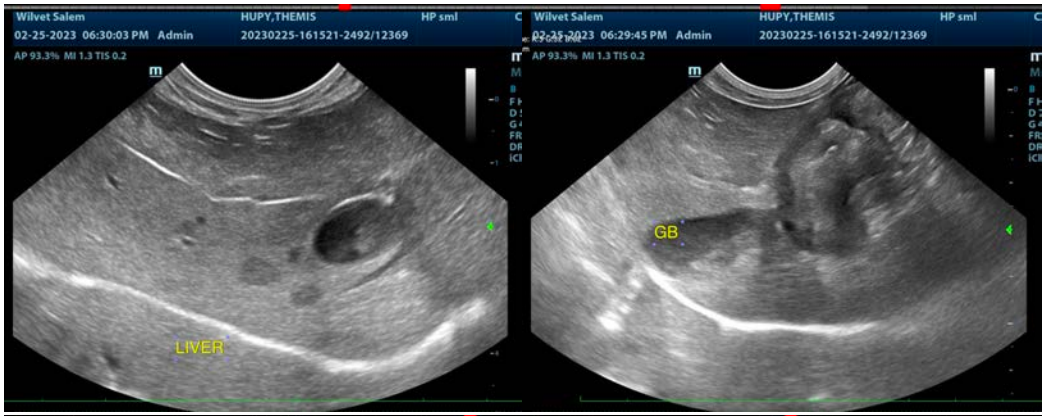
Dr. Brittany Gardner

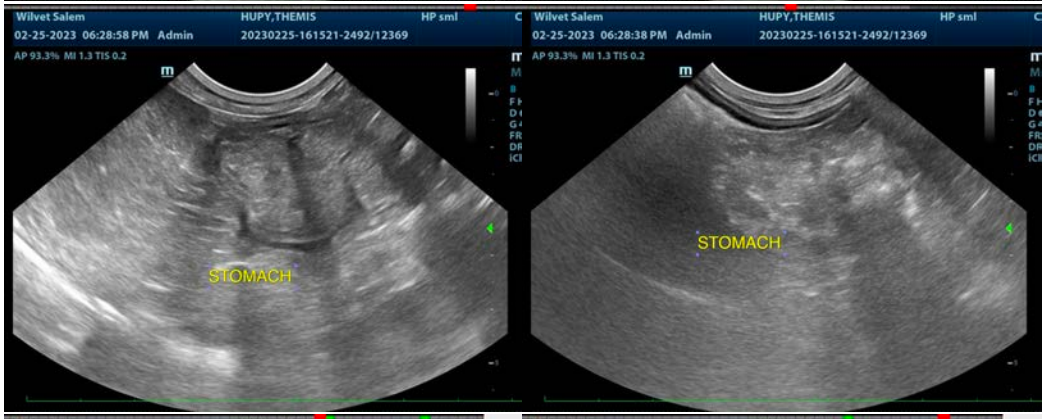
INVOICE

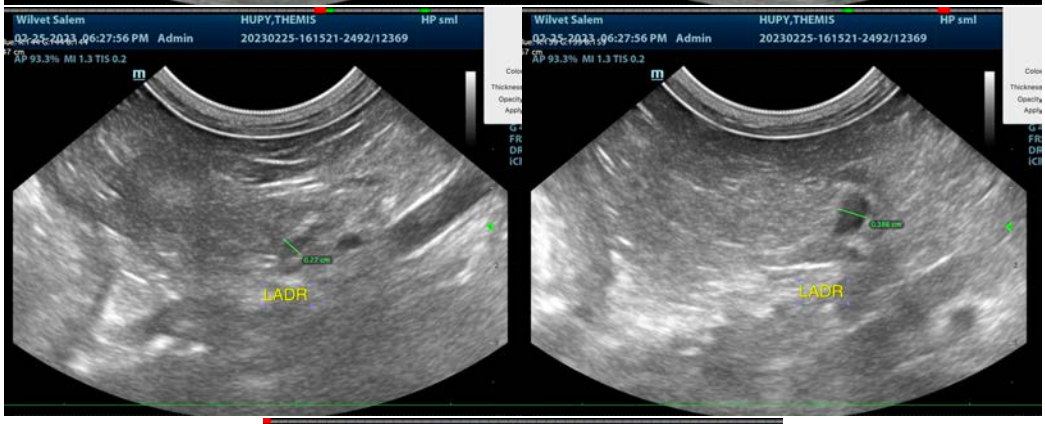
45498

DATE

2/25/23

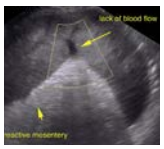
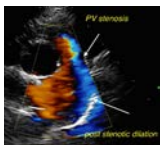
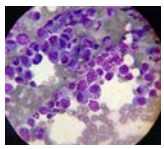
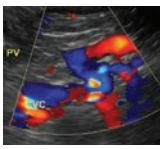






SonoPath
Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Thermis Hupy

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.2 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Brittany Gardner

HOSPITAL NAME

Wilvet Salem

REFERRING VET

Dr. Brittany Gardner

INVOICE

45498

DATE

2/25/23

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com