



**PATIENT**

Reggie Butler

**SPECIES**

Canine

**BREED**

Bernese Mountain Dog

**SEX**

Neutered male

**AGE**

6 years

**WEIGHT**

52 kg

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Dr. Barnes

**HOSPITAL NAME**

Westview VH

**REFERRING VET**

Dr. Barnes

**INVOICE**

98114

**DATE**

4/6/22

**PRESENTING CLINICAL SIGNS**

**History:** Recently seen for caudal tongue abscess. Has responded to treatment. Had stertorous respiration which has resolved. AUS for evaluation kidneys and pancreas and live  
**Abnormal PE/Chem/CBC/UA Results:** During work up noted CBC Increase in WBC characterized by neutrophilia Chem - SDMA and Creatinine elevated, ALT and Amyl elevated ABNORMAL SNAP CPL  
**Xrays:** 1. The possibility of soft tissue thickening/edema within the dorsal nasopharyngeal region does need to be highly suspected. Neoplasia cannot be ruled out. 2. Mild dynamic tracheal collapse. 3. Otherwise unremarkable thorax. 4. Suspect gastritis due to nonspecific etiologies in an otherwise unremarkable abdomen.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary bladder**

The urinary bladder is adequately filled. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra. There is no evidence of sediment, cystoliths, polyps or a mass. Ureteral papillae are visualized and unremarkable.

**Kidneys**

The **left** kidney is within normal limits in size (8.17 cm) and the capsule is smooth. The cortex is mildly to moderately hyperechoic, i.e., it is mildly hyperechoic to the liver. A mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the arcuate arteries, diverticulae and pelvis are present without evidence of nephroliths or pyelectasia. Accumulation of intrapelvic fat is also noted. The surrounding mesentery is not hyperechoic.

The **right** kidney is within normal limits in size (7.84 cm). Findings are similar to the left kidney.

**Adrenal glands**

The **left** adrenal gland measures 0.85 cm at the cranial pole, 0.84 cm at the caudal pole and 2.97 cm in length. It is enlarged and “plump” at both poles. An obvious mass and abnormalities with the echogenicity or echotexture are not identified. There are no abnormalities in the phrenicoabdominal veins or the surrounding vasculature.

The **right** adrenal gland measures 0.66 cm at the cranial pole, 0.66 cm at the caudal pole and 2.24 cm in length. No abnormalities are noted with the gland’s shape, overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

**Spleen**

The capsule of the spleen is smooth. The echogenicity is within normal limits, however, a subtle, diffuse “miliary” or mottled echotexture is observed. The latter is more apparent in certain views. Although the echotexture may be due to extramedullary hematopoiesis or splenitis, one cannot exclude early infiltrative disease, such as lymphoma, a mast cell tumour or histiocytic sarcoma.



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**Liver**

There are no obvious signs of hepatomegaly. Its borders are smooth, but mildly rounded. A diffuse, mildly coarse or granular echotexture is observed. No obvious abnormalities are noted with the hepatic vessels. Mild to moderate perivascular cuffing is noted, which may be due to the accumulation of fat and mineralization.

**Gallbladder**

A small amount of echogenic material is visualized within the gallbladder, which is most likely clinically insignificant. The biliary system is otherwise within normal limits.

**Gastrointestinal tract**

The gastric wall is normal in thickness. There is no loss of definition of the normal architecture of the layers of the stomach wall. A large amount of ingesta and gas are present, however, no obvious abnormalities are noted with its peristalsis.

The small intestinal wall thickness is within normal limits and there is no evidence of dilation. The definition of the wall layers is preserved. The colonic wall is not thickened and mural detail is considered normal. There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction.

**Pancreas**

Both the left and right limbs are mildly hypoechoic compared to the surrounding mesentery. Multiple hypoechoic nodules of variable size are dispersed throughout the parenchyma. The latter are suggestive of nodular hyperplasia, rather than neoplasia. Mild, smoldering, active pancreatitis cannot be excluded based on the hypoechoic echogenicity and mildly hyperechoic mesentery.

**Other**

**Lymph nodes**

There is no evidence of lymphadenomegaly.

Abdominal effusion is not observed.

**ULTRASONOGRAPHIC FINDINGS**

The subtle mottled appearance of the spleen may be due to splenitis due to antigenic stimulation or extramedullary hematopoiesis. However, other differential diagnoses include early infiltrative disease, such as lymphoma, mast cell tumour and histiocytic sarcoma. Given Reggie's breed, a fine needle aspirate of the spleen is warranted.

The enlarged and plump left adrenal gland may be an incidental finding and clinically insignificant. Other differential diagnoses include hyperplasia or an adenoma. There is no evidence of neoplasia.



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Reggie Butler

Further diagnostics for hyperadrenocorticism are *not* recommended for the moment, providing Reggie is not demonstrating clinical signs, such as excessive panting, polydipsia, polyuria, polyphagia, etc.

**SPECIES**

Canine

The renal changes are suggestive of glomerulonephritis or interstitial nephritis, both of which Bernese Mountain dogs are predisposed to. Glomerulonephritis may also occur due to hyperadrenocorticism. Pyelonephritis is considered less likely, however, it cannot be excluded despite the absence of sonographic abnormalities.

**BREED**

Bernese Mountain Dog

A reactive hepatopathy is suspected based on the subtle changes observed with the hepatic echotexture. Although the presence of gall bladder sludge is most likely clinically insignificant, evaluation of Reggie's history is suggested to ensure he is not suffering from signs of gastroesophageal reflux disease.

**SEX**

Neutered male

A mild, smoldering, active pancreatitis cannot be excluded based on the hypoechoic echogenicity of the pancreas and mildly hyperechoic mesentery. The multiple hypoechoic nodules of variable size are dispersed throughout the parenchyma are suggestive of nodular hyperplasia, which is a benign, age-related change.

**AGE**

6 years

Although no abnormalities are observed with the gastrointestinal tract, one cannot rule out the possibility of delayed gastric emptying if Reggie was fasted for the ultrasound.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

52 kg

A urinalysis and urine culture and sensitivity are recommended to obtain a baseline urine specific gravity and exclude an infection, respectively. If it is negative, a urine protein: creatinine ratio is strongly suggested.

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If proteinuria is confirmed, further diagnostic tests should be pursued to exclude common causes of glomerulonephritis, for example, leptospirosis, tick borne diseases and heartworm disease.

A fine needle aspirate of the spleen is recommended, as mentioned.

**IMAGING PERFORMED BY**

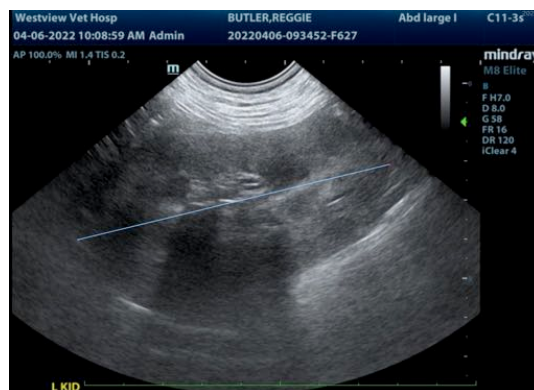
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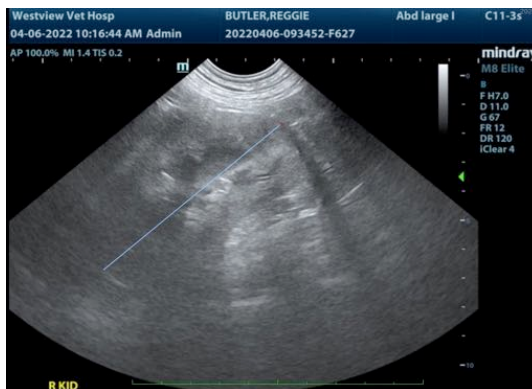
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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