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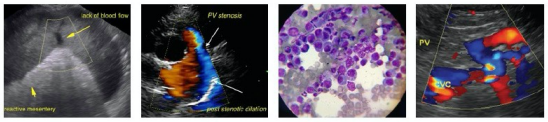

Portable Animal Western Sonography, Inc.
IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Moka Erickson

SPECIES

Canine

BREED

Cockapoo

SEX

Spayed Female

AGE

14 Years

WEIGHT

30 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

MountainView AH

REFERRING VET

Dr. Gambino

INVOICE

35871

DATE

2/24/22

PRESENTING CLINICAL SIGNS

Moka presented acutely this morning for ADR. She was lethargic, falling off of furniture and unwilling to eat or drink. On presentation to the rDVM she would found to be hyperthermic at 105.5. She was cooled to 103 over 1 hour with ice packs, fan and alcohol on her foot pads. CBC/Chem was fairly unremarkable other than an elevation in ALT of 850. Radiographs were obtained of her chest and abdomen. Chest was clear and abdomen was suspicious for right hepatic abscess (radiologist could not exclude a GI rupture, septic peritonitis or other origin for mass and fluid in belly). There was peritoneal effusion and possible pneumoperitonitis. Will send radiology report once received from regular vte. She was placed on IV fluids at twice maintenance and transferred to us for an emergency ultrasound to work up next steps for owners. The big clinical question is whether this patient is stable for a 4 hour drive to bay area to be transferred to their local ER or possibly needs emergency surgery or more immediate hospitalization.
Abnormal PE/Chem/CBC/UA Results: Radiographs submitted to AIS: 1. Unremarkable thorax. No pulmonary metastasis, cardiomegaly, or lymphadenopathy. 2. Right hepatic abscess; cholecystitis or gallbladder abscess cannot be entirely excluded but is much less likely. 3. Gastric foreign material (potentially consistent with a hair tight); no evidence of small intestinal mechanical obstruction or linear foreign body is seen, though thorough evaluation of the intestines is hindered by the peritoneal pathology (described below). 4. Moderate peritoneal effusion with suspect pneumoperitoneum; consider septic peritonitis most likely. This may be secondary to intestinal perforation or rupture of the hepatic abscess. Abdominocentesis and/or abdominal ultrasound would be helpful for further evaluation. Exploratory laparotomy could also be considered.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** presented a relatively uniform thickening of the cranioventral and craniodorsal mucosae with micropolypoid mucosal changes without involvement of the submucosae. The urine presented some echogenicity consistent with suspended debris. No evidence of urethral pathology was present. This presentation is most consistent with chronic cystitis. Technically transitional cell carcinoma cannot be ruled out without histopathological review but is not overtly suspected based on this pattern. Cystocentesis and urine culture +/- pathological review of urine cytology would be warranted. No overt calculi were present at this time.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 5.23 cm. The right kidney measured 5.1 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.0 cm at the cranial pole and 0.62 cm at the caudal pole. The left adrenal gland measured 0.69 cm at the cranial pole and 0.70 cm at the caudal pole.

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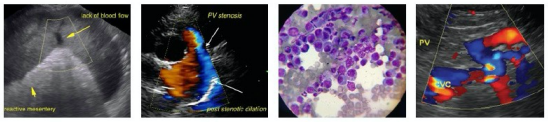

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Spleen

The **spleen** was enlarged with subtle heterogeneous parenchymal changes.

Liver

The **liver** presented gas penetration within the biliary tree, consistent with emphysematous cholangiohepatitis and abscessation. Multifocal hypoechoic nodular changes present. Reactive mesentery noted around the hepatic contour. A hypoechoic nodular abscess was noted in the left lateral liver measuring approximately 2.0 cm x 1.0 cm. FNA indicated. The gallbladder was echogenic and mildly thickened, yet not overdistended.

Gastrointestinal

Variable upper **gastrointestinal** thickening noted with empty colon and empty stomach. The gastric wall was thickened. No overt evidence of perforation noted. However, hyperechoic changes noted throughout the cranial abdomen obscured some visibility.

Pancreas

The **pancreas** revealed mixed hypoechoic parenchymal changes with enhanced hyperechoic mesentery enveloping the upper duodenum.

Free Abdomen

A moderate amount of echogenic free fluid was noted in the abdomen, consistent with hemoabdomen or significantly modified transudate.

ULTRASONOGRAPHIC FINDINGS

- Emphysematous cholangiohepatitis
- Peritonitis with penumoperitonium and biliary abscessation
- Concurrent gastroenteritis/pancreatitis
- Chronic cystitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a possibility of underlying neoplastic process in this patient. However, recommend aggressive treatment for cholangiohepatitis and pancreatitis with FNA spleen and liver (general hepatic parenchyma as well as the hypoechoic nodules). Full coagulation panel warranted, as the hemorrhage in the abdomen may be owing to coagulopathy. Coagulation panel is essential prior to sampling. Plasma transfusion, plasma expanders, Enrofloxacin/Clindamycin combination or similar recommended. GI protectants warranted. Prognosis is guarded. Recheck sonogram every 24-48 hours to further assess progressive worsening of the presentation or resolution.

Cytospin of the abdominal fluid recommended to assess for any neoplastic cells as well. Culture and sensitivity of the fluid and preferably of the spleen and liver also warranted. The presentation in the liver is not resectable, as there is biliary gas noted in both the left and right liver with a higher concentration in the right liver. No overt foreign body noted. However, penetrating upper GI foreign body could not be completely ruled out. However, there is no obstructive pattern. Visibility is obscured owing to the hyperechoic interfering inflammation owing to peritonitis. Prognosis is extremely guarded.

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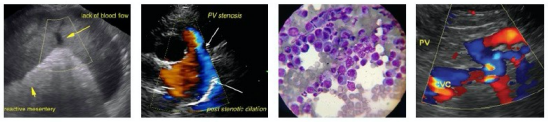

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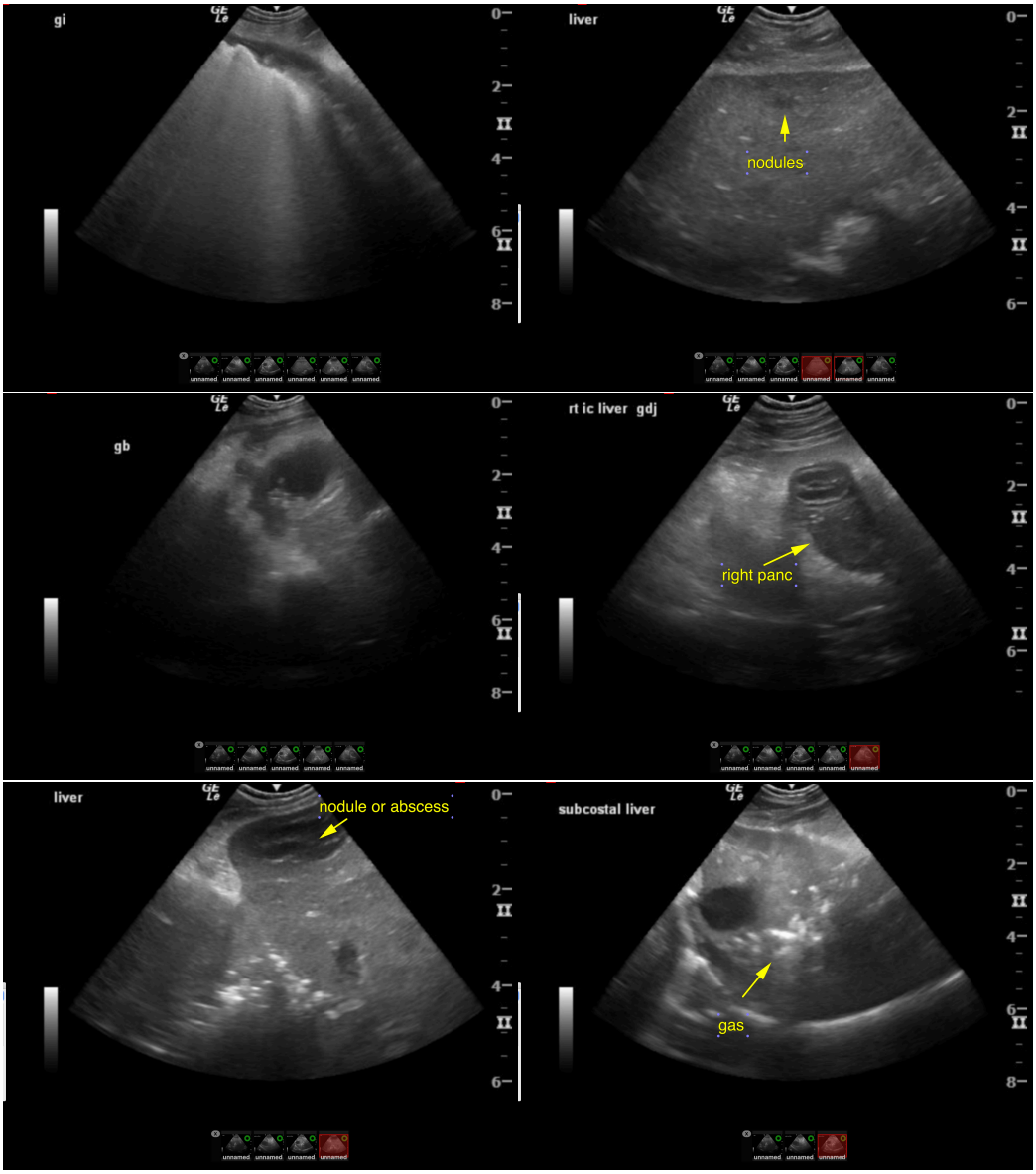
Exploratory surgery with expectation to assess for penetrating foreign body and abdominal lavage, liver biopsy and culture would also be a valid approach in this patient. However, recommend plasma transfusion and coagulation panel prior to any surgical approach or sampling of any organs.



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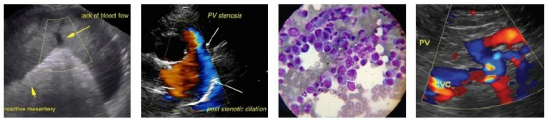

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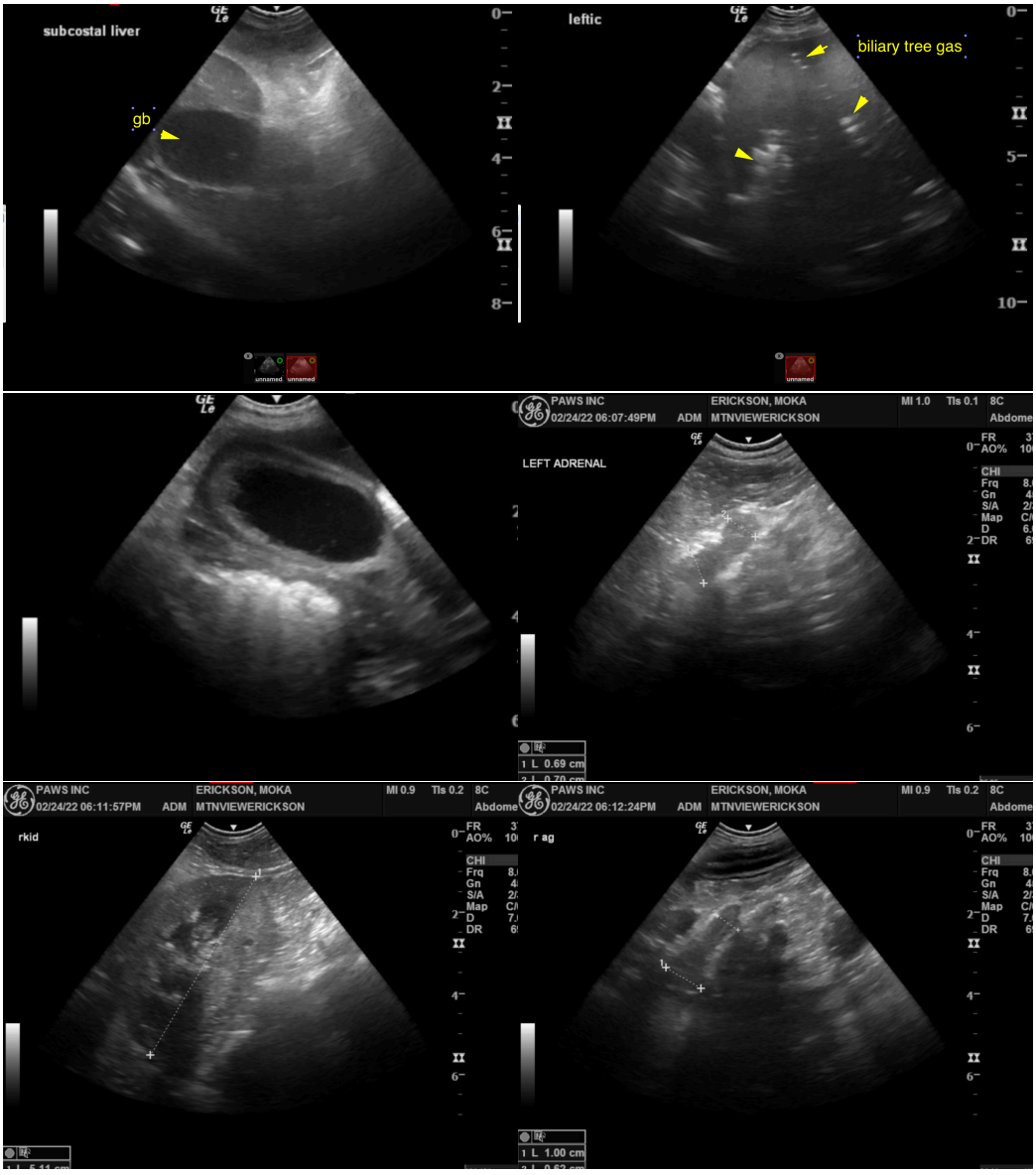

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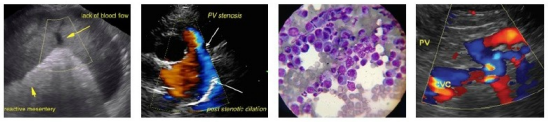

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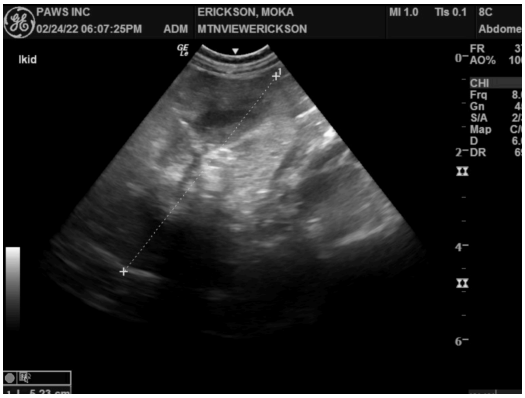

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com