



PATIENT PRESENTING CLINICAL SIGNS

Sophie Isfeld History: Chronic urinary incontinence with consistent hyposthenuria.

SPECIES Physical Examination: N/A.

Canine Urinalysis: Constant SG 1.008.

CBC: Normal.

BREED Serum Biochemistry: Normal.

Fench bulldog Radiographic Findings: N/A.

SEX

FS

AGE

7 years

WEIGHT

8.4 kg

INTERPRETED BY

Remo Lobetti, BVSc,
MMedVet (Med), PhD,
Dipl. ECVIM

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Full urinary bladder with a normal thickness and appearance of the wall. Normal anechoic urine with no sediment or uroliths evident.

Normal trigone area, proximal urethra, and iliac blood vessels.

Normal iliac lymph nodes (1.3 cm). Ureters not visualized.

Normal renal size (left 4.4 cm, right 5.1 cm), echogenic appearance, cortico-medullary differentiation, blood flow, capsule, and pelvis.

Reproductive System

N/A.

IMAGING PERFORMED BY

Dr Alastair Westcott,
DVM

Adrenal Glands

Normal shape, echogenic appearance, and position. Normal size of the left gland (1.86 x 0.6/0.48 cm). Plump appearance of the right gland (2.76 x 0.34/0.87 cm). Focal hyperechoic area in the caudal pole of the left gland.

HOSPITAL NAME

Spleen

Normal size (1.2 cm) and echogenic appearance. Smooth homogenous parenchyma, smooth curvi-linear capsule, and normal vasculature. No evidence of inflammatory, neoplastic, infarction, or infiltrative changes noted.

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Liver

INVOICE

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Normal size, echogenic appearance, and portal markings. No nodules or masses evident. Small gall bladder containing small amount of hyperechogenic sediment. Normal thickness and echogenic appearance of the gall bladder wall. Normal bile duct (0.3 cm).

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2 /9/22



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Gastrointestinal

Segmental thickening of the gastric wall and duodenum (0.57 cm) with a hypoechogenic appearance of the submucosal layer but with no loss of layering or distention of the lumen. Prominent hypoechogenic appearance of the submucosal layer of the small intestine but with no loss of layering or distention of the lumen. Normal appearance of the ileo-cecal junction and colon

Pancreas

Normal size (right 0.5 cm, left 0.6 cm) and echogenic appearance. Regular capsule. Normal echogenic appearance of the mesentery and fat surrounding the pancreas.

Free Abdomen

No mesenteric lymphadenomegaly.
No ascites.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Gastro-enteropathy.
- Plump right adrenal.

Secondary Findings:

- Gall bladder sediment.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Etiologies for the gastro-enteropathy would be incidental finding with inflammatory bowel disease, dietary hypersensitivity, and parasitic enteritis possible differential diagnoses and possibly could be causing low-grade abdominal discomfort with subsequent polydipsia and secondary polyuria.

Although the right adrenomegaly may merely be an incidental finding, disease stress and emerging Cushing's disease needs to be considered, the latter especially with the presenting clinical signs and hyposthenuria.

Initial further assessment would be fecal analysis and an ACTH stimulation or low-dose-dexamethasone suppression test. Endoscopy of the upper GI tract with biopsies can also be considered.



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Other possible etiologies for the hyposthenuria would be partial central diabetes insipidus, psychogenic polydipsia, medullary solute wash-out, neurological disease, and severely protein-restricted diet; with further assessment being dietary history, quantification of water intake, measurement/calculation of serum osmolality, serum SDMA, and modified water deprivation test. Serum osmolality can be calculated as follows, with the presence of low osmolality supportive of primary polydipsia:

$$\text{Osmolality (mOsm/kg)} = 2 ((\text{sodium [mEq/L]}) + (\text{glucose [mg/dL]}/18) + (\text{BUN [mg/dL]}/2.8))$$

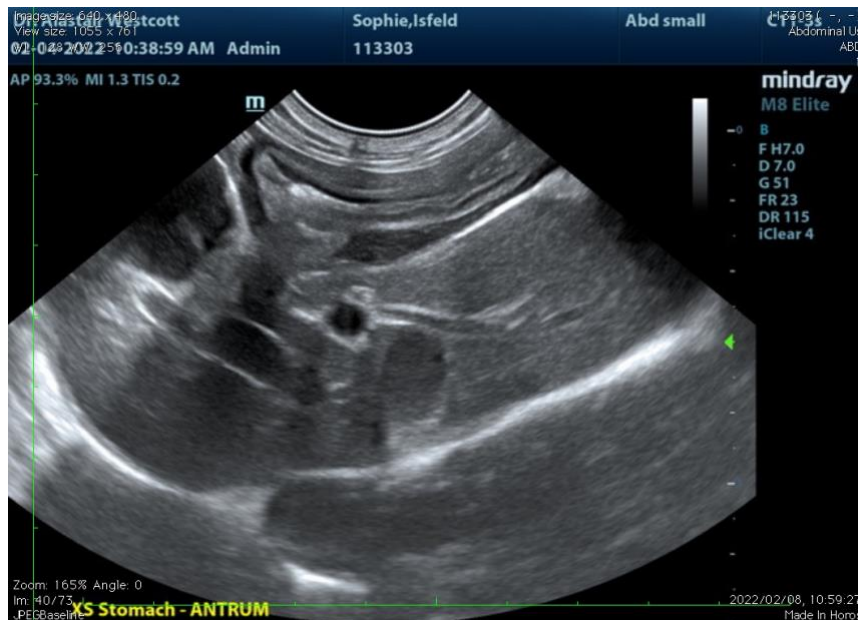
Modified water deprivation test:

Increase the protein content of the diet and start with 120 mls/kg water per day for 2-3 days; then reduce to 80 mls/kg for 2-3 days; then reduce to 60mls/kg for 2-3 days. After that stop water and monitor hematocrit, total solids, and SG. Continue until 5% dehydrated. If no improvement in SG then use vasopressin and continue monitoring the SG.

Specific therapy would be dependent on an etiological diagnosis.

IMAGES

Stomach





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Duodenum

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Left adrenal



The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

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