

Diagnostic Imaging report

Date: 29/09/2020

Referring veterinary surgeon: xxxx

Hospital: xxxx

Email address: xxxx

Patient name and surname: xxxx

Species (canine/feline): Feline **Breed:** Russian Blue **Age:** 9 **Sex:** MN

Previous report and date (if applicable): N/A

Body areas scanned and charged:

Chest and Abdomen

Service required: Priority 24 hrs

Relevant clinical history, clinical findings and diagnostic test results:

Clinical History

presented for further assessment of pancreatitis and cholangitis. He has suffered a number of pancreatitis episodes, the last episode in 2018 requiring hospitalisation for medications and fluid therapy. a pattern of XXXX becoming inappetant, vomiting and suffering marked weight loss during these episodes. Blood samples taken on 03/09/2020 had revealed mild elevation in urea, cholesterol and moderate elevation in ALT (177 IU/L, ref 16-50). Total T4 was low normal. An ultrasound scan had identified a splenocaval portosystemic shunt. There appeared to be dilation and obstruction of the pancreatic duct and common bile duct in the absence of an obvious mass lesion or cholelith.

Diagnostics

Coagulation profile - Both PT and APTT were prolonged

Haematology - leukocytosis with neutrophilia and monocytosis

Biochemistry - revealed hypokalaemia and mild elevation in urea 11.6 (3.6-10.7) mmol/L.

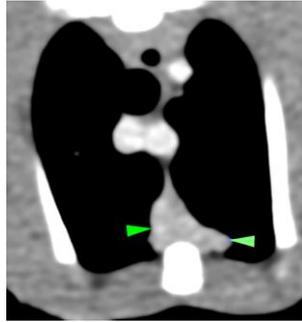
A serum sample was sent to an external laboratory for assessment of cobalamin and folate

Questions to be answered:

Is there evidence of a physical obstruction causing the biliary dilation? Please comment on the shunt as described from ultrasound. Thank you

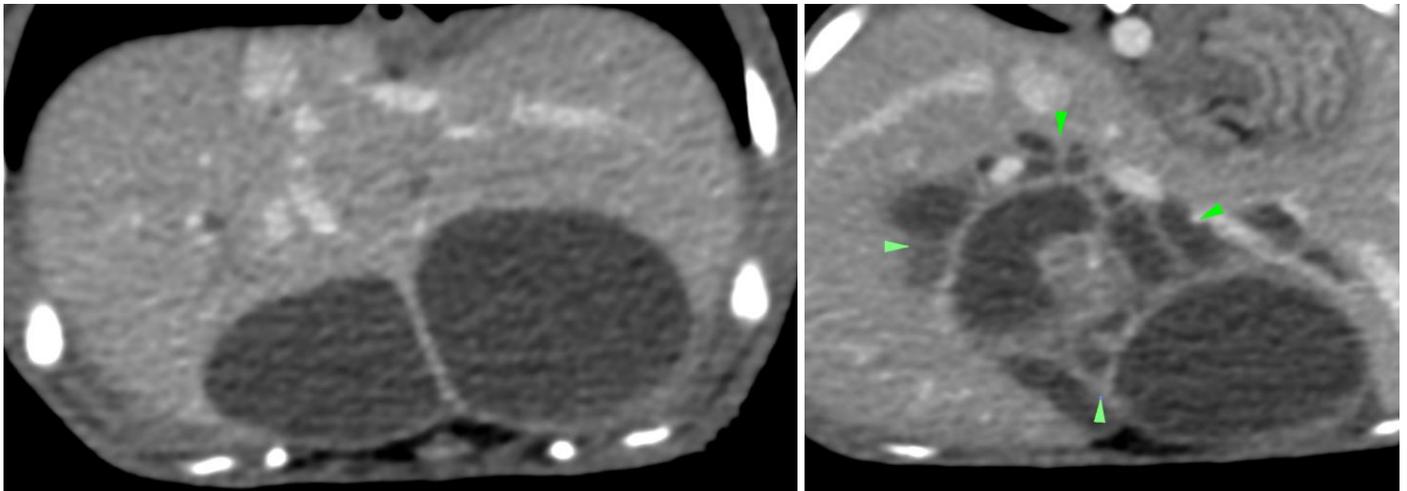
Report

The lung parenchyma and airways are unremarkable. There are two small soft tissue attenuating nodules noted on the midline just dorsal to the sternbrae (see image below, green arrow heads), consistent with mild enlargement of the presternal lymph nodes. The thoracic lymph nodes are otherwise unremarkable. There is no further evidence of mediastinal or pleural pathology.

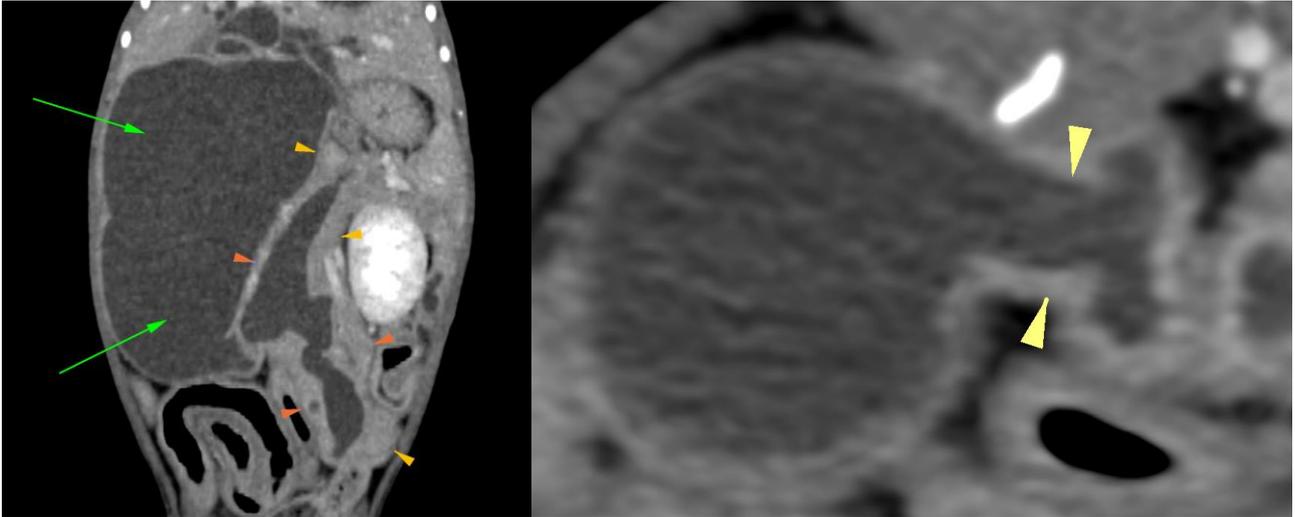


Abdomen:

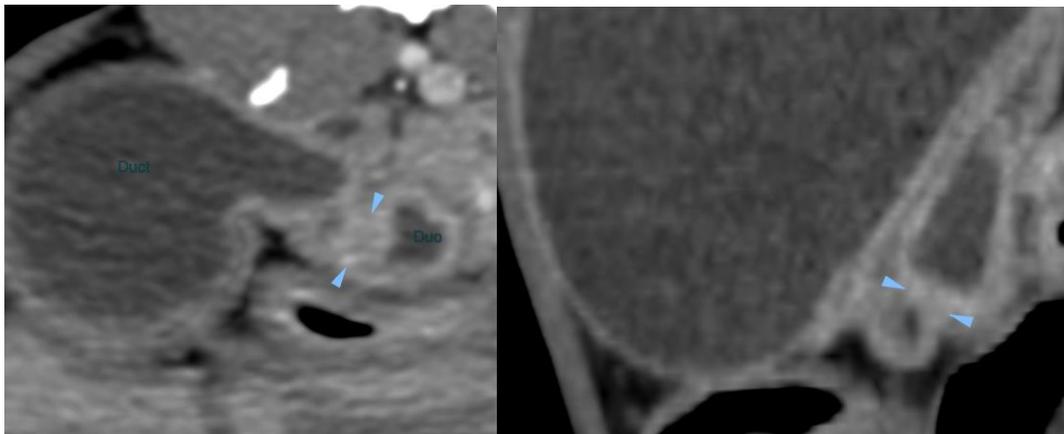
There is marked enlargement of the gall bladder, with a further smaller fluid filled structure noted immediately adjacent to the right side of the gall bladder (see image below). Both of these structures have a small duct arising from them, extending into tortuous cystic and common bile ducts. These ducts form a complex plexus of mild-moderately dilated ducts in the region of the portal hiatus (see image below, between green arrow heads). There is further mild-moderate dilation of the intra-hepatic bile ducts. The liver parenchyma is considered grossly unremarkable.



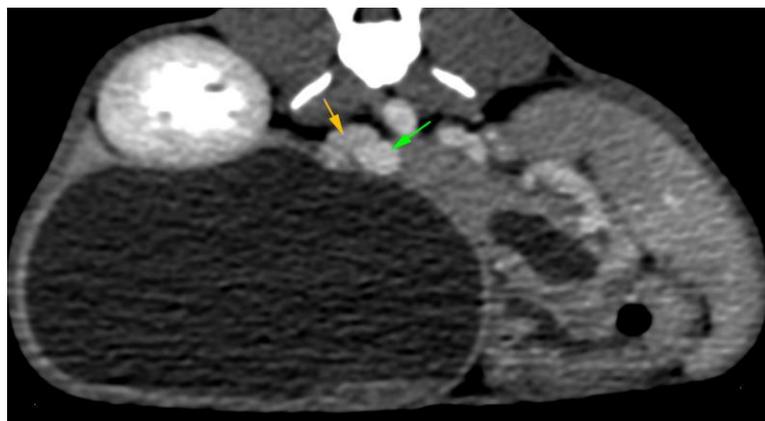
There is an extremely large fluid attenuating structure with a relatively thin wall occupying the right cranial abdomen (see image below, green arrows). This structure measures up to 8cm diameter by 11.5cm in length. There are multiple small (<2mm) mineral dense foci noted at the ventral aspect of this structure. Cranially this structure communicates directly with the above described plexus of bile ducts and also directly with the intra-hepatic bile ducts. Caudally, there is direct communication with the pancreatic ducts (see image below, between yellow arrow) which are markedly dilated along the entire length of the pancreas (see left image below, pancreas outlined by orange arrow heads).



In addition, at this level caudally, this structure can also be traced to the duodenal papilla which is mildly thickened (see images below, blue arrow heads). There is no evidence of obstruction at the level of the papilla.



This biliary mass exerts a marked localized mass effect, with the right kidney dorsally displaced, the right limb and body of the pancreas, gastric antrum and descending duodenum medially displaced and the bowel caudally displaced. The portal vein (green arrow, see image below) is dorsally displaced as it passes over the dorsal aspect of the swelling; at this point the portal vein abuts the ventral wall of the caudal vena cava (orange arrow), with compression of both structures appreciated, cranially the cava and the portal vein diverge with normal hepatic branches noted. There is no evidence of an anomalous portal vessel.



The abdominal contents are otherwise unremarkable. There is no evidence of free fluid or mesenteric reaction.

The patient has relatively poor body condition with small amounts of fat reserves.

The musculoskeletal structures are considered unremarkable.

Conclusion

1. Severe distension of the common bile duct and pancreatic ducts with no evidence of an obstructive lesion.
2. Mild thickening of the duodenal papilla; likely represents an underlying inflammatory foci.
3. Further moderate intra-hepatic duct and gall bladder distension.
4. No evidence of active pancreatitis.
5. No evidence of a portosystemic shunting vessel.
6. Mild pre-sternal lymphadenopathy, likely reactive lymphadenopathy.
7. Otherwise normal abdomen and thorax

Comments

The distension of the common bile duct and pancreatic ducts is severe and in the absence of an obstructive lesion and presence of multiple small choleliths is considered most likely to reflect a chronic underlying inflammation (cholangiohepatitis and chronic pancreatitis) and chronic biliary stasis. There is no evidence of an underlying malignancy. If sampling of the bile is to be considered I would recommend via the gall bladder through hepatic parenchyma due to the risk of rupture of the common bile duct wall and subsequent bile peritonitis.

There is no gross evidence of a portosystemic shunt. In the presence of the gross biliary abnormality, the ultrasound examination is considered to have been extremely challenging. The distension of the common bile duct has displaced the portal vein dorsally towards the cava and I suspect this is where the shunt is considered to have been sonographically. The cava and portal vein subsequently divert and have normal appearance and diameter cranially. I have consulted a colleague on the presence or absence of a portosystemic shunt in this case and unprompted they came to the same conclusion.

This is an extremely interesting case and I would very much appreciate any feedback.

Many thanks for referring this case to Vet Oracle Teleradiology. If you have any further questions or comments regarding this case please do not hesitate to contact us at teleradiology@vetoracle.com

Reporting Radiologist

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