

Liver lobe torsion in a cat presented with a hemoabdomen

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INTRODUCTION: Liver lobe torsions are rarely encountered in dogs and cats. Clinical signs are variable as presentation can be acute or chronic and may include abdominal pain, anorexia, anemia, abdominal effusion, lethargy and sudden death. Liver lobe torsion has been reported in adult and old cats only.

CASE DESCRIPTION: An 11-month-old, spayed female domestic shorthair cat was presented in emergency for evaluation of acute severe lethargy. On physical examination, the cat was hypothermic, bradycardic with pale pink mucous membranes, poor pulses and a distended abdomen. The indirect systolic blood pressure (Doppler) was 50 mmHg. Abdominal point of care ultrasound showed significant abdominal effusion. Abdominocentesis revealed a hemoabdomen. The bloodwork showed regenerative anemia (9,8%), neutrophilia, hypoproteinemia, hypoalbuminemia, an increase of alanine aminotransferase, hyperlactataemia (10,5mmol/L) and hypokalemia. A first transfusion (erythrocytes concentrate Blood type A) was administered as a bolus and the cat's temperature was normalized. After this transfusion, the cat was stable with a systolic pressure of 90mmHg but 4 hours later, the cat was again hypotensive at 60mmHg. A crystalloid fluid bolus did not really improve blood pressure and a colloid fluid bolus raised transiently the pressure to 90 mmHg. At this moment, the microhematocrit was 15% and lactate was 6,5 mmol/L. A second canine xenotransfusion was realized without any complications. As blood pressure normalized and lactate improved, complete abdominal ultrasonography examination revealed a large volume of free echogenic fluid in the abdominal cavity probably secondary to active hemorrhage and suspicion of right medial lobe and gallbladder torsion (Figures 1 and 2). Exploratory laparotomy was performed, revealing torsion of the right medial and squared hepatic lobes together with the gallbladder (Figure 3). A lobectomy of the affected lobes and a cholecystectomy was performed using a surgical stapler. The cat was discharged after 4 days. Histopathologic examination of the right medial liver lobe concluded a pseudocyst with torsion of a hepatic lobe and hemorrhagic infarction associated with a mucocele. One month postoperatively, the cat had totally recovered, hematology was normal, and alanine aminotransferase and aspartate aminotransferase were still slightly increased.



Figure 3: Intraoperative view of the torsed right medial and squared hepatic lobes with the gallbladder.

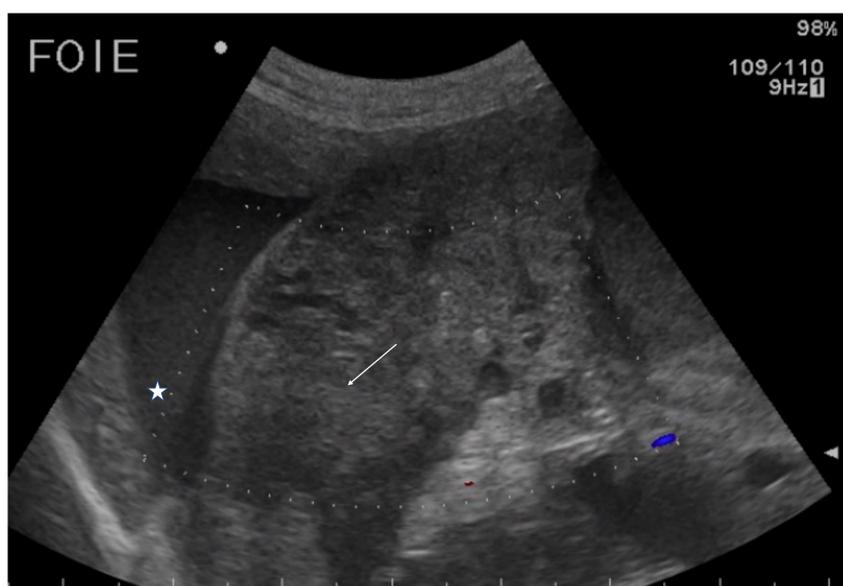


Figure 1: Ultrasonography of the torsed right medial hepatic lobe. This lobe is heterogenous, increased in size, containing hypoechoic areas (arrow). No blood flow could be observed on Doppler examination. Note the presence of echogenic free peritoneal fluid (star).

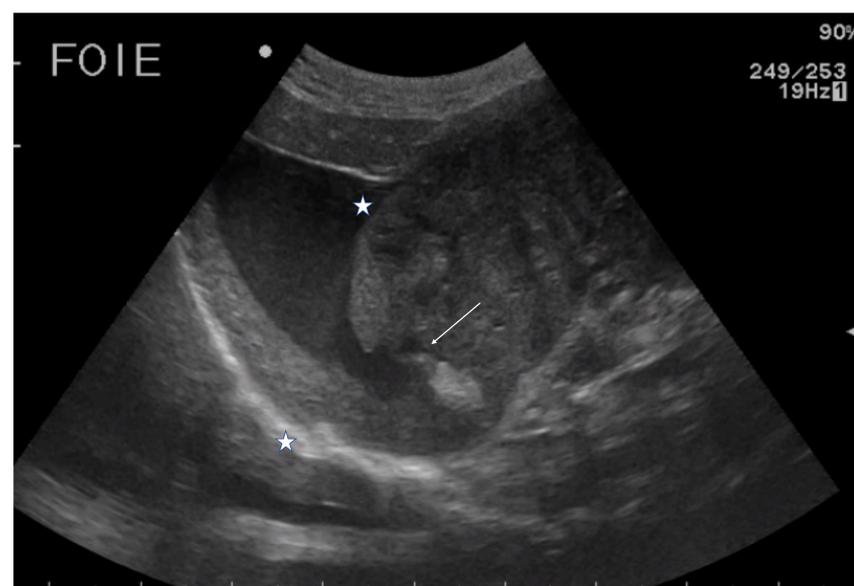


Figure 2: Ultrasonographic image illustrating the distinction between normal hepatic parenchyma (stars) and the torsed hepatic lobe (arrow). This torsed lobe is heterogenous, increased in size, containing hypoechoic areas.

DISCUSSION / CONCLUSION: This case report describes an uncommon presentation of a hemoabdomen in a young cat secondary to a liver lobe and gallbladder torsion, managed with blood transfusions and successfully treated by one stage liver lobe lobectomy and cholecystectomy. Liver lobe torsion therefore appears to be a rare cause of hemoabdomen in young cats.