

# Radiographic and Ultrasonographic Findings of Gall Bladder Rupture in 3 Dogs

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**Signalment:** Three dogs (a Cocker-spaniel, a Poodle and a mixed breed) were referred for vomiting, nausea, icterus, abdominal distension.

**Results:** They showed leukocytosis, increased liver enzymes (alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase and gamma glutamyl transferase) on the blood profiles. One dog (10-year old, Poodle) also increased renal enzymes (Ca, P, blood urea nitrogen, Creatinine). Abdominal radiographs showed serosal detail loss especially in the cranial abdomen. Abdominal ultrasonographic findings were a discontinuity in the gall bladder wall, along with the presence of hyperechoic fat at the periphery of the gall bladder and the presence of peritoneal effusion. One dog showed thickened gall bladder wall and a crescent-shaped anechoic structure with fine radiating striations at the caudal margin of the liver. The other dog showed the dilation of the common bile duct and cystic duct. These patients were diagnosed as gall bladder rupture and performed cholecystectomy. On the surgery, rupture of the fundus of the gall bladder or cystic duct and bile peritonitis were confirmed. After the surgery, all 3 dogs had good prognosis.

**Clinical relevance:** Rupture of the gallbladder is most often seen with cholelithiasis, necrotizing cholecystitis, gall bladder mucocele or blunt trauma. Regardless of the causes, the end result is bile peritonitis and life threatening condition. Ultrasonography may be a useful method in gall bladder rupture diagnosis. If diagnosis is delayed, necrosis, bacterial peritonitis, and adhesions can develop, which could affect the successful management and worsens the prognosis.

**Key words:** gall bladder rupture, ultrasonography, dog

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