

Gallbladder Agenesis in a Crossbreed Dog

A 17-month-old male crossbreed dog was presented with anorexia and vomiting. Biochemistry revealed a moderate increase of liver parameters with unremarkable hematology results. Abdominal ultrasound showed microhepatia and absence of gallbladder. Laparoscopic exploration and CT scan confirmed the ultrasound findings. Histopathology of the liver showed multiple changes compatible with a possible ductal plate malformation (DPM). One and a half months after the discharged being on a low-fat diet, S-adenosylmethionine and antiemetics blood work showed a decrease in alanine transferase, alkaline phosphatase and gamma-glutamyl transpeptidases. Nevertheless, the patient continued vomiting intermittently despite the treatment.

Gallbladder agenesis (GA) is a rare condition in dogs with only twenty cases reported previously^{1,2,3}. The etiology remains unknown in dogs, in humans it is thought to be a developmental failure during the embryogenesis of the pars cystic from which the gallbladder arises⁴. In this case we described the clinical findings and diagnostic procedure of a dog with GA that was admitted for vomiting and a moderate increase on the liver enzymes, especially ALT and GGT.

When a gallbladder is not found on abdominal ultrasound it is recommended to perform an advanced diagnostic imaging procedure such computed tomography (CT) or magnetic resonance cholangiography.

1. Austin B, Tillson DM, Kuhnt LA. Gallbladder agenesis in a Maltese dog. *J Am Anim Hosp Assoc* 2006;42(4):308–11.
2. Kamishina H, Katayama M, Okamura Y, et al. Gallbladder agenesis in a chihuahua. *J Vet Med Sci* 2010;72(7):959–62.
3. Sato K, Sakai M, Hayakawa S, Sakamoto Y, Kagawa Y, Kutara K, Teshima K. (2018) Gallbladder Agenesis in 17 Dogs: 2006-2016. *J Vet Intern Med* 2018; 32:188-194.
4. Fiaschetti V, Calabrese G, Viarani S, et al. Gallbladder agenesis and cystic duct absence in an adult patient diagnosed by magnetic resonance cholangiography: report of a case and review of the literature. *Case Rep Med* 2009;674768.