Gallbladder agenesis in a Miniature Pinscher: computed tomographic and ultrasonographic features

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Background/Aim
Prevalence of gallbladder agenesis (GBA) is an extremely rare both in humans and dogs. GBA in humans is generally found incidentally during either abdominal surgery or autopsy. The etiology of GBA is unknown both in dogs and humans, but in humans it is generally thought to be a developmental failure of the pars cystic from which the gallbladder arise during embryogenesis. Until recently GBA in dogs has been reported in only two young female Maltese dogs and in a Chihuahua. We report a case of a Miniature Pinscher with long-term elevation of alanine transferase (ALT) levels, because of GBA, which was confirmed by computed tomography (CT) after being on the basis of ultrasonographic findings.

Methods
A 4-year-old spayed female Miniature Pinscher weighing 3.44 kg was examined by the referring veterinarian for a health screening. On presentation, the dog was alert, and physical examinations revealed no abnormalities. The findings of complete blood count were within normal limits. Serum biochemistry profiles revealed marked elevation in the levels of liver enzymes. Thoracic and abdominal radiographs showed mild microhepatica. Abdominal ultrasonography revealed normal morphology and echogenicity of the liver. But the gallbladder could not be visualized in any plane. Abdominal CT scan was performed to further identify anatomical abnormalities.

Results
A diagnosis of gallbladder agenesis was confirmed based on lack of a gallbladder on ultrasonography and on CT scan.

Conclusion
This cased demonstrates that GBA in a dog can be more easily visualized than previous conventional diagnostic tools if we use abdominal CT scan.

Keywords: computed tomography, dog, gallbladder agenesis, Miniature Pinscher