

BASIC INFORMATION

Description

The gall bladder is a small pouch or sac that contains bile produced by the liver. The gall bladder stores bile until it is released into the small intestine, where it helps in the digestion of fat. In people, the most common disease of the gall bladder is gall stones. In dogs, inflammation of the gall bladder can occur, but the formation of hard stones is uncommon. The gall bladder can also become infected by bacteria, and some cancers can develop in the gall bladder, but these disorders are less common than the condition called *biliary mucocele*. A mucocele develops when bile becomes thickened and is retained in the gall bladder, causing it to become enlarged.

Causes

The cause of most gall bladder disease, particularly biliary mucocele, is not well defined in the dog. Many dogs with gall bladder disease have some sort of underlying metabolic or hormonal problem. Both hypothyroidism (low thyroid hormone levels) and hyperadrenocorticism (excessive steroid hormone levels) are associated with an increased risk of developing a biliary mucocele.

Clinical Signs

Common signs of gall bladder disease include a poor appetite, weight loss, vomiting, and diarrhea. In some dogs with severe obstruction of the gall bladder, the feces become a light tan to gray color due to lack of bile, which contains pigments that eventually turn the feces brown. The dog may also have jaundice (yellow discoloration of the gums, whites of the eyes, and skin). If the gall bladder is ruptured, bile peritonitis often develops, and the dog becomes severely ill. The dog may collapse, go into shock (with weak pulses), develop a high fever, have a painful abdomen, and be severely dehydrated.

Diagnostic Tests

Routine laboratory tests are used to assess the state of the liver, the presence of severe inflammation, and the degree of dehydration. X-rays of the abdomen may be recommended. The best method of assessing the gall bladder is an abdominal ultrasound. The gall bladder is usually easy to see on ultrasound. If a mucocele is present, marked thickening of the gall bladder wall is commonly present, and the gall bladder is filled with thick, dehydrated, sludge-like bile. The abnormal bile and thickened wall give the gall bladder an

appearance similar to a cross-sectioned kiwi fruit. If a gall bladder mucocele is not identified on ultrasound, a biopsy of the liver and a bile sample may be submitted for microscopic examination and bacterial culture. Other tests may be recommended to rule out other diseases that cause similar signs.

TREATMENT AND FOLLOW-UP

Treatment Options

A sick dog with a biliary mucocele is usually a surgical emergency, because the obstructed gall bladder must be removed before it ruptures. Rupture of the mucocele, particularly if it is infected by bacteria, leads to bile peritonitis, which can be life-threatening. If a mucocele is detected before the dog becomes ill, surgery to remove the gall bladder is still recommended. Gall bladder surgery can be technically challenging and carries significant risks, so your dog may be referred to a veterinary surgery specialist for the procedure.

If formation of the mucocele is incomplete, drugs may be tried that make the bile more watery and allow it to flow more easily. Dogs treated medically require close monitoring, because their condition can rapidly deteriorate if the mucocele worsens.

Follow-up Care

Frequent follow-up visits are usually needed when a mucocele is treated medically. At least monthly abdominal ultrasounds and laboratory testing are often recommended.

Following surgery, the dog is hospitalized and closely monitored for several days. Postoperative follow-up visits are often continued until all laboratory tests have returned to normal.

Prognosis

Surgery to remove a gall bladder mucocele is relatively risky. Even in the hands of experienced surgeons and with good intensive postoperative care, about 1 in 10 dogs die during surgery or immediately (24-36 hours) afterward. If the gall bladder has ruptured and bile peritonitis is present, the mortality rate increases to 1 in 4 dogs. If the gall bladder was infected when it ruptured, the dog may die during the surgery or within 24 hours of surgery.

If an underlying medical condition can be identified and drugs can dissolve the bile, the prognosis may be better but it is still guarded (uncertain), because these dogs can worsen rapidly even with appropriate treatment.