

Cholecystectomy

Indications:

The gallbladder lies between the liver lobes and stores bile that is produced within the liver. It connects with a duct (common bile duct) to the small intestine (duodenum). Diseases of the gall bladder that require surgery are diseases of the gallbladder (such as gallbladder mucocele), or trauma to the gallbladder. In some instances obstruction of bile flow is also present. Obstruction of bile flow may be caused by material within the lumen of the common bile duct itself, or due to compression due to tumors or local inflammation (for example pancreatitis).

Preoperative workup and other diagnostics of gallbladder mucoceles:

Most of these GI cases are referred either emergently or urgently. Although, in some cases, in certain breeds gall bladder removal might be scheduled earlier in the disease process before clinical signs develop, or on a scheduled basis, after a work up to further investigate & delineate their disease and the extent of their disease.

- General physical examination prior to anesthesia
- Preoperative laboratory work & imaging:
 - Mostly done prior to referral to the soft tissue surgery service
 - Extent of the workup depends on the history and clinical signs of your pet. But the workup will typically involve bloodwork & other lab analyses (such as coagulation profile) as well as imaging – starting with radiographs and ultrasonography, and if needed additional imaging such as CT.
 - Culture of bile/gall bladder, potentially liver
 - Histopathology of gall bladder and a liver biopsy

Procedures:

A full abdominal exploratory surgery is performed through a midline incision. During this exploratory surgery, the surgeon will visually assess all abdominal organs and palpate organs as indicated in order to look for any abnormalities.

Assessment of common bile duct patency: The surgeon will assess the common bile duct visually, and if there are any concerns about presence of material within the duct (or tissue from outside compressing (pushing on) the duct, an opening in the intestine where the duct enters the intestinal tract (duodenum) can be made to catheterize the duct.

Cholecystectomy: The gall bladder is surrounded by liver tissue, and will be freed from its surroundings to allow full removal at the level of its connection to the bile duct.

Complications:

Potential problems that can be present even before surgery include coagulopathies, icterus, refractory hypotension, sepsis, and bile peritonitis due to rupture or leakage from the biliary tract.

- Anesthesia: as with any surgical procedure, there are always risks associated with general anesthesia. For otherwise healthy pets, these risks are usually low, but the risks



are significantly increased in animals with systemic illness, such as biliary obstructions, or bile peritonitis.

- Surgical site complications: this can range from a local dehiscence, to a fluid pocket (seroma) that will resolve on its own, or can be a local abscess that might need to be treated surgically.
 - Complications of the cholecystomy site include bleeding, leakage of bile leading to bile peritonitis and postoperative obstruction of the common bile duct. A second surgery is needed to revise any areas of leakage.
 - Intestinal dehiscence if an incision in the duodenum was made to assess common bile duct patency: This is a major complication, and the risk is increase if the intestinal wall is unhealthy or with very sick animals, with contents of the GI tract spilling in the abdomen. A second surgery is needed to revise any areas of leakage.
- Your surgeon will discuss these complications in more detail during your pet's visit.

In hospital care:

- Hospitalization in intensive care is typically needed postoperatively to recover from surgery. Patients may require transfusions, nutritional support, and will have frequent bloodwork performed to monitor their progress. Depending the duration & severity of your pet's clinical signs/disease, the surgical findings and how they recover, it can be several days to longer than a week until your pet is healthy enough to continue care at home.
- If there was a perforation or rupture of the gallbladder (bile leakage/bile peritonitis) we will place a drain (tube) might be placed in your pet's belly, allowing us to monitor how their belly is healing. If we're worried about inflammation inside the abdomen, we will most likely also place a drain. We will remove this drain before your pet goes home with you.
- In some cases a feeding tube might be placed, either in the esophagus, or directly in the stomach. These might be left in place for continued at home feeding, and if so, specific care and feeding instructions will be provided for you.

At home care:

- Exercise restriction: leash walks/exercise restriction for the first 10-14 days after surgery to allow all the incisions to heal.
 - Incision care: this includes keeping the incision dry and clean, as well as wearing an E-collar as long as the incision is still healing (first 10-14 days postoperatively).
 - Concerns for intestinal dehiscence/leakage at the cholecystectomy site: other than monitoring for signs, such as lethargy, inappetence, fever, no specific care can be instituted to minimize the risk for dehiscence.
 - Feeding tube care: see separate information sheet.
- require hospital stays on average 5 – 7 days.

Prognosis:

Depends whether the gallbladder is ruptured, and if so, whether the bile is infected.