

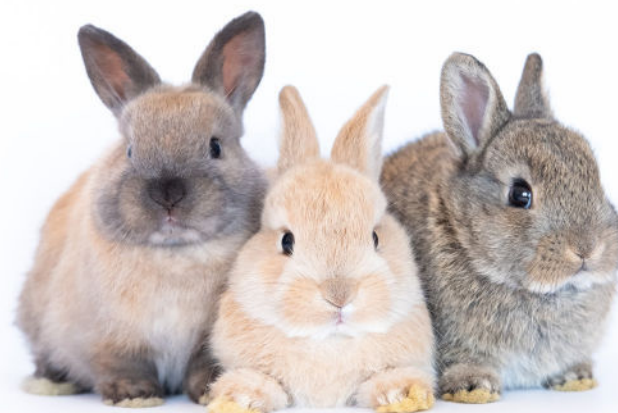
Liver Lobe Torsion in Rabbits

Introduction

A liver lobe torsion is a potentially life-threatening condition that can occur in many species, including rabbits. In this condition, a portion of the liver twists on itself, cutting off blood flow. If left untreated, liver lobe torsions can lead to death.

The liver of many species, including rabbits, is divided into six parts called lobes. A liver lobe torsion occurs when any of the six lobes twists around its attachment point. This stops blood from flowing through the veins leading out of the lobe, causing tissue death. Additionally, the affected lobe may break apart, leading to internal bleeding and death.

Due to the seriousness of this condition, early diagnosis and treatment is essential. You, the pet owner, are very important in diagnosing and treating a liver lobe torsion. Outcomes are always better when rabbits are presented to the veterinarian early when the patient is still medically stable.



to assess the best treatment for your rabbit, the following tests are used together: bloodwork, radiographs (X-rays), and ultrasound (sonogram). Bloodwork can identify anemia (lower red blood cell count) and high liver enzymes, which are signs of liver lobe torsion. It can also detect other diseases, such as kidney injury. Although radiographs (X-rays) may be performed, they alone cannot reliably diagnose the condition.

Most cases of liver lobe torsion are diagnosed by ultrasound (sonogram). The affected lobe may have changes to it and may lack blood flow. If there is significant blood loss, free fluid within the abdomen may also be seen. Computed

QUICK FACTS



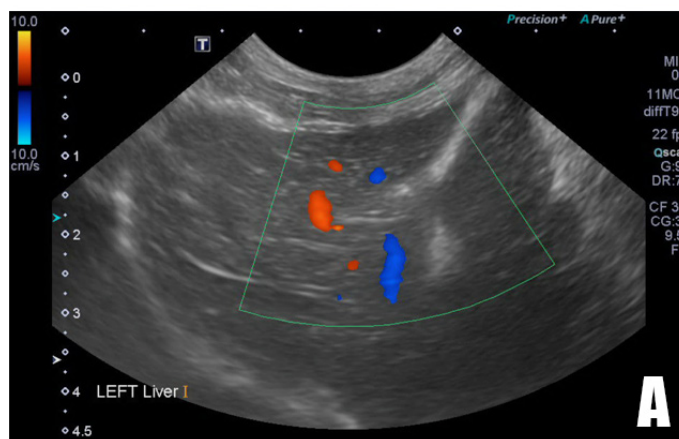
1. Liver lobe torsion is a newly recognized condition in rabbits
2. Lop breeds and males are the most commonly affected
3. Affected rabbits will show non-specific signs of illness, including:
 - Reduced or absent appetite
 - Reduced activity (lethargy)
 - Decreased fecal production lasting one or more days
 - Hunched appearance due to abdominal pain
4. Surgery to remove the affected liver lobe is often the best treatment with the highest long-term survival rate. However, some rabbits respond to medical treatment without having surgery

Clinical Signs & Symptoms

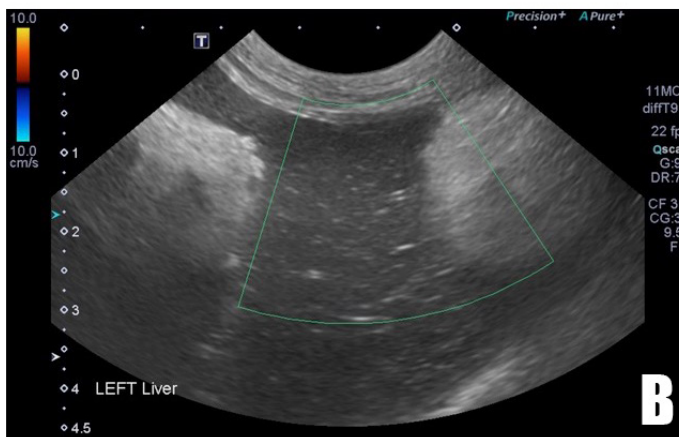
Rabbits with liver lobe torsion usually suddenly develop symptoms and require emergency medical attention. They may show non-specific symptoms that are usually associated with Rabbit Gastrointestinal Stasis. These symptoms include a decrease in eating and pooping, a distended and firm abdomen, lethargy, increased hiding behavior, and signs of abdominal pain such as a hunched body position and sensitivity when touching the belly. However, these symptoms are not exclusive to liver lobe torsions. Some cases of liver lobe torsion may be chronic and have a history of gastrointestinal symptoms that come and go.

Diagnosis

A diagnosis of liver lobe torsion is based on the combined results of many different tests. No single test result is evaluated alone. The history you provide, along with certain physical examination findings, can suggest a liver lobe torsion. To



A: Normal liver with normal blood flow as seen by color doppler.



B: Torsed liver lobe without blood flow

tomography (CT or CAT scan) is an advanced tool that can also be used to look at the liver and confirm a torsion. The availability of this test will vary by facility and may be cost-prohibitive.

Key diagnostics:

- Physical examination
- Bloodwork
- Ultrasound
- Computed tomography

Treatment

Liver lobe torsion can be treated in two ways: surgery to remove the affected liver lobe or medical management. The best treatment for your rabbit will depend on many factors, including its age, the presence of anemia (decreased red blood cells), the presence of blood in the abdomen, and the existence of other health problems.

Surgical removal of the affected liver lobe is usually the best treatment. This is the fastest way to stop further bleeding, remove dead tissue, and prevent the release of toxins. Most rabbits that have surgery will survive and recover, but anesthetic risk and blood loss will vary for each animal, and these factors can impact an individual's prognosis. Severely anemic rabbits may require a blood transfusion from another rabbit. Rabbits that survive surgery and hospitalization have an excellent prognosis with no known long-term health consequences.

Rabbits that do not present with anemia or blood within the abdomen can be hospitalized for intensive care, including fluid support, pain medications, and syringe feeding. The long-term survival rate is higher for rabbits with surgery than those with medical management only. Complications may present weeks to months after release from the hospital.

Risk to Others

Liver lobe torsions are not infectious or contagious to other rabbits.

Risk Factors

In most species, liver lobe torsions are rare but it may be more common in rabbits. A recent study reported that they occurred in 0.7% (i.e., 7/1000) of rabbits presenting to a hospital. Before this study, liver lobe torsions were often found incidentally on necropsies (animal autopsies), as no symptoms of liver lobe torsion were reported before death. However, our understanding of this disease has improved in recent years, and these numbers may continue to change.

The average age for rabbits with liver lobe torsion is about 4 years old. Some studies suggest that male rabbits may be more at risk, but not all studies support this. While no specific breed is at the highest risk, it is seen more in brown and white spotted lop-eared rabbits. The exact reasons a liver lobe torsion may occur in a rabbit is unknown. In other species, there are many risk factors for liver lobe torsions, including trauma to the abdomen, differences in liver anatomy and supportive ligaments that are present at birth, or liver disease.

Since the risk factors for rabbits developing liver lobe torsions are largely unknown, there is no effective way to prevent or reduce the risk of it happening. Regularly monitoring your rabbit's appetite, urine production, fecal production, attitude, and energy levels will help identify symptoms of liver lobe torsion. Early evaluation by a veterinarian when these symptoms are seen will increase the chance of successful treatment.

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