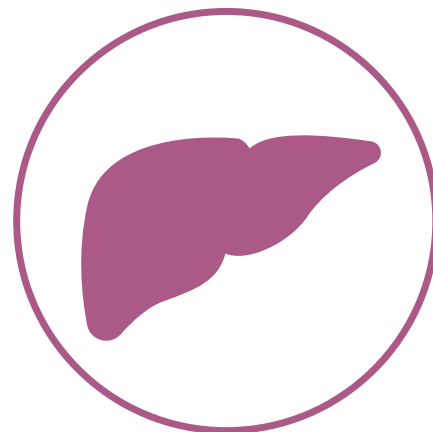


**Hepatic Disorders**

# FELINE CHOLANGITIS



Feline cholangitis is an inflammatory liver disease involving the bile ducts and, occasionally, surrounding liver tissue.<sup>1,2</sup> The World Small Animal Veterinary Association Liver Standardization Group categorizes 3 types of feline cholangitis: neutrophilic, lymphocytic, and chronic due to liver fluke infection.<sup>1</sup>

Cats with neutrophilic and lymphocytic cholangitis present, in general, with similar signs: anorexia (cats with the lymphocytic form may instead be polyphagic), weight loss, lethargy, vomiting, and diarrhea. Cats may be dehydrated and jaundiced. Cats with neutrophilic cholangitis usually present more acutely (1–2 weeks) than those with lymphocytic (several weeks to months). Chronic cholangitis due to liver flukes is seen in tropical and subtropical areas and is often asymptomatic.<sup>1</sup>

Neutrophilic cholangitis may occur in association with chronic enteropathy and/or pancreatitis (acute or chronic). Triaditis, the combination of all 3 diseases, is diagnosed in approximately 25% of cats with neutrophilic cholangitis.<sup>2</sup>

Due to anorexia and weight loss, cats with cholangitis are at high risk of developing hepatic lipidosis. In addition to medical management, intensive nutritional support is crucial.

**Key Messages**

- Stabilize pet and correct for dehydration and electrolyte abnormalities. Begin intensive nutritional support as soon as possible.<sup>3</sup>
  - The use of an indwelling feeding tube allows convenient delivery of nutrients. The use of a syringe or “force” feeding is strongly discouraged since this causes additional stress and may potentially lead to food aversion or aspiration.<sup>4</sup>
    - A nasoesophageal feeding tube may be the best option for initial support since it can be inserted without sedation and used immediately. Only liquid diets should be used with these tubes due to the small diameter.
    - In a patient stable for anesthesia, esophagostomy tubes are quick to place and well tolerated by most cats. (Videos from veterinary specialists are available online if an overview of the procedure for esophagostomy tube placement is needed.) A gastrostomy tube is also a good option.<sup>4</sup>
  - Calculate resting energy requirements (RER) =  $70 \times \text{body weight (kg)}^{0.75}$  to determine volume of food.<sup>3</sup> Start with 1/3 of the volume on the 1st day split over 6–8 feedings, then gradually increase to full RER over next few days. Feed slowly over 10–15 minutes and look for signs of nausea such as drooling or licking of the lips. If seen, temporarily stop the feeding and resume once resolved. Gradually decrease number of feedings by increasing volume provided per meal.<sup>3,4</sup>

*(continued on next page)*

## Key Messages (continued)

- Be careful not to overfeed or increase volume of food too quickly, especially initially, as this may cause refeeding syndrome.
  - Refeeding syndrome causes abrupt decreases in serum levels of potassium, phosphorus, and/or magnesium. Monitor serum levels closely, and supplement if needed.<sup>3,5</sup>
- Feed a high calorie formula, such as a critical care or recovery formula, containing high protein (40–50% of metabolizable energy [ME]) unless pet is exhibiting signs of hepatic encephalopathy. If needed, blend food with small amount of water or liquid enteral diet to achieve consistency that will pass easily through the feeding tube. Be sure to flush the tube before and after each feeding with water.
- Before discharging patient with a feeding tube, instruct owner on proper use and care. Allowing the owner to feed the cat while in the clinic can help alleviate owner concerns. Voluntary food intake at home should be encouraged by offering various dry and wet cat foods prior to each tube feeding. Warm the food to room temperature to enhance aroma and taste. The feeding tube can be removed once the cat is eating nutritionally balanced food reliably.
- Consider supplementation of the following nutrients:<sup>5,6</sup>
  - Carnitine, which is needed for transport of free fatty acids, may improve lipid metabolism.
  - Vitamin K if coagulation parameters are abnormal.
  - B vitamins support energy metabolism in the liver. Vitamin B12 may stimulate appetite.
  - Vitamin E may help reduce oxidative damage secondary to cholestasis.
  - The long chain omega-3 fatty acids eicosapentaenoic acid and docosahexaenoic acid may reduce inflammation.
- Monitor weight, body condition score, and muscle condition score. Once the cat is fully stable and eating well, diet and calorie intake can be adjusted as needed.

## References

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