**CLIENT EDUCATION HANDOUT**

**Customer Name, Street Address, City, State, Zip code**

**Phone number, Alt. phone number, Fax number, e-mail address, web site**

**Cholelithiasis**

**Basics**

**Overview**

* Refers to calculi (stones) in the biliary tree of the liver
* Ascending bacterial infection from the small intestine into the liver is thought to predispose to stone formation
* Horses may develop a single stone or multiple stones within the bile ducts of the liver and/or a single stone or multiple stones within the common bile duct that normally carries bile from the liver to the small intestine. Horses do not have a gallbladder
* When the bile ducts become blocked by stones, bile backs up into the liver and causes liver disease

**Signalment**

* Most affected horses are 5–15 years of age; however, there have been cases reported in horses as young as 3 years; there are no breed or sex predilections

**Signs**

• Intermittent abdominal pain (colic)

• Icterus (jaundice)

• Fever

• Depression

• Weight loss

• Signs of neurologic disease including depression, coma, blindness, or even maniacal behavior

• Photosensitization (skin ulceration following exposure to ultraviolet light, especially on nonpigmented areas of the body)

**Causes**

• The condition is sporadic. It is unknown why, in some horses, retrograde infection from the small intestine into the liver predisposes to stone formation

**Risk Factors**

• No clearly established risk factors have been identified

**Treatment**

**Appropriate Health Care**

* Most patients are hospitalized for the initial phase of treatment
* Long-term treatment can be carried out on an outpatient basis

**Activity**

* Forced exercise should be avoided for the duration of treatment
* Patients should be protected from sunlight as liver disease can predispose to photosensitization (see Signs)

**Surgical Considerations**

* In patients with unsuccessful response to medical therapy, surgery to remove or fragment the stone(s) may be indicated

**Medications**

* Long-term antibiotic therapy to treat underlying infection
* Medications to reduce inflammation and make bile more liquid and easier to excrete (ursodiol (ursodeoxycholic acid))
* Medications to solubilize stones (dimethyl sulfoxide (DMSO))
* Supportive care including intravenous fluids and systemic anti-inflammatories, especially in more severely affected horses

**Follow-Up**

**Patient Monitoring**

* Sequential ultrasonographic examinations and bloodwork may assist in monitoring response to therapy. Antimicrobials are continued until clinical recovery and bloodwork normalization has occurred. This may take a period of months

**Expected Course and Prognosis**

• Prognosis depends on severity of the problem

• Surgical intervention is not easy owing to the difficulty in accessing stones in the horse

**Key Points**

* Cholelithiasis is an uncommon condition in the horse
* Physical examination, bloodwork, ultrasonography, and biopsy of the liver will aid in the diagnosis of the disease
* Some cases may respond to medical treatment, including long-term antibiotics, while in other cases surgical removal of the stone may be indicated
* Prognosis depends on the severity of the underlying liver disease



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*Blackwell's Five-Minute Veterinary Consult: Equine, Third Edition,* Jean-Pierre Lavoie © 2020 John Wiley & Sons, Inc.