Sewing thread lodged under a cat's tongue caused an intestinal obstruction: a case report

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Abstract

A 4-year-old cat was admitted to a private veterinary clinic with complaints of lethargy, intermittent vomiting, and anorexia. A sewing thread was found under the cat’s tongue on clinical examination. An abdominal ultrasound confirmed the presence of a linear foreign body in the duodenum. Emergency surgery was performed on the day of the presentation. The sewing thread was successfully extracted by enterotomy. The cat’s recovery proceeded without complications.

Keywords: cat, sewing thread, linear foreign body, duodenotomy, ultrasonography

1. Introduction

Ingestion of foreign objects is a common clinical problem in cats. The most commonly ingestible foreign bodies include string, needles, toys, and hair (Bostami et al. 2020). The cats can often swallow these types of items without any problem. If the object moves freely through the intestinal tract, it can pass and be cleared in the feces. The issues occur when a linear item becomes anchored in the digestive system. The most common anchor point is the tongue. The item is caught under the tongue and then swallowed, resulting in an anchored linear item descending into the stomach and intestines. Early detection of foreign bodies in the intestines of cats is crucial for successful treatment and a good prognosis for the patient (Parlak et al. 2022). However, the presence of linear foreign objects (LFOs), such as threads, tapes, or strings, poses a challenge. If not removed, LFOs can get stuck in the digestive tract, causing obstruction and potentially leading to severe complications, such as perforation or peritonitis. The underlying pathophysiology of gastrointestinal foreign body obstruction results from a failure of the forward flow of gastrointestinal contents secondary to the physical presence of the foreign material (Koenig and Wallace 2022). Clinical signs of gastrointestinal foreign bodies include vomiting, anorexia, lethargy, and abdominal pain (Nandini et al 2017). Typically, surgical intervention is recommended in patients who develop clinical signs or whose foreign body fails to advance after three days (Lee 2018). Ultrasound has become widely used to identify foreign objects or gastrointestinal obstruction in animals, with some suggesting ultrasound may be preferred over survey radiography (Koenig and Wallace 2022). In our case, abdominal ultrasound for a linear foreign body was only an auxiliary diagnostic method, as the sewing thread that had become lodged under the tongue was detected during an examination of the cat’s oral cavity.

2. Case description

In late December 2022, a 4-year-old female cat belonging to a client was brought to the Private Veterinary Clinic Kind Doctor in Dnipro with complaints of lethargy, vomiting, lack of appetite and of thirst for several days. On clinical examination, the cat was lethargic, and she sat with her back arched, head lolled towards the ground. The cat was dehydrated, and her hair was unkempt. Rectal temperature was within normal limits, and heart and respiratory rates were elevated.

On opening the cat’s mouth, a sewing thread was found lodged in the base of the tongue (Figure 1). On palpation of the cat’s abdominal wall, pain was noted. Ultrasound sonography showed a classical “string of pearls” gas pattern in the abdomen consistent with a linear foreign body. Bloodwork showed an elevation in blood urea nitrogen, creatinine, and urea. The
hematocrit was elevated. A complete blood count showed increased white blood cells with the white blood cell formula shift to the left.

Based on the history, clinical examination, and abdominal ultrasound, a linear foreign body was diagnosed, and a surgical correction was performed on the presentation day.

3. Treatment and Discussion

The cat was sedated with xylazine hydrochloride, 1 mg/kg body weight (XYLA®, Interchemie Werken, Holland) and general anesthesia was induced with tiletamine/zolazepam 15 mg/kg body weight and maintained 7.5 mg/kg body weight (Zoletil®, Virbac Laboratories, France). The cat was premedicated with atropine 0.05 mg/kg body weight (Atropine Sulfate; Darnitsa, Ukraine) 15 min before general anesthesia.

The ventral midline was prepared aseptically for surgery. A ventral midline laparotomy incision was given, and the stomach and intestines were exteriorized carefully. Small incisions on the duodenum were given, and a sewing thread was also found in the intestine cavity (Figure 2). Several long pieces of sewing thread were removed successfully after they had previously been cut under the cat’s tongue. The enterotomy wound were closed with a simple interrupted appositional pattern with 4-0 monofilament absorbable suture. Abdominal lavage was performed with warmed Normal saline solution. Abdominal muscles, and skin were sutured in a regular manner.

Figure 1 Appearance of the cat on clinical examination (A), sewing thread lodged under the cat’s tongue (B), ultrasound sonography showed a classical “string of pearls” gas pattern in the abdomen consistent with a linear foreign body (C).
Postoperatively the cat has been treated with ceftriaxone 30 mg/kg body weight (Ceftriaxone-Darnitsa; Darnitsa, Ukraine) for seven days and dexmedetomidine 10 μg/kg body weight (Dexdomitor®; Zoetis, USA) for three days. Postoperatively food and water were withheld for three days, and the cat was maintained with parenteral nutrition, which included crystalloids and colloids twice daily. Sutures were removed on the 14th day of operation, and successful recovery was noticed. The animal recovered uneventfully.

Although gastrointestinal foreign bodies are a fairly common surgical pathology in pets, linear foreign bodies are more common in cats than dogs. Moreover, in most cases, the foreign bodies are filamentous (Felts et al 1984). These foreign bodies cause a unique intestinal obstruction associated with severe and extensive intestinal tract damage and rarely pass without complications (Nandini et al 2017). Checking under the tongue for the presence of sewing thread is not always possible, and even if a thread is present, it is not always visible. Often the only hint is the presence of an intestinal fold on the radiograph or ultrasound.

The decision about surgical intervention is usually made based on how ill the patient looks by resorting to a diagnostic laparotomy. In a study by Basher and Fowler (1987), approximately one-third of the 24 cats with foreign tongue bodies were able to avoid surgery by simply cutting the string under the tongue. After loosening the string tension in these patients, the remainder of the line could pass without complications. If the cat did not show improved appetite and activity or continued to vomit, or was still more apathetic, only then was a surgical revision performed.
4. Conclusions

Gastrointestinal foreign bodies are a common reason for presenting to veterinary emergency departments. A thorough oral examination should be performed on cats showing gastrointestinal symptoms. An animal examination found that the cat had a sewing thread under the tongue, causing gastrointestinal tract obstruction due to a linear foreign body. The animal recovered without complications after a timely diagnosis and surgical intervention.

Ethical considerations

Animal care and handling procedures followed the Ethics Committee’s guidelines on the Use of Animals in Experiments. (The Commission on Bioethics of the Dnipro State Agrarian and Economic University, protocol No. 1/05 dated May 5, 2023).

Conflict of Interest

There was no conflict of interest.

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References