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## Successful surgical retrieval of sewing needle from stomach of A Shih TZU Dog

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### Abstract

A male Shih Tzu dog of 8 months old was presented to the Veterinary Clinical Complex, with a suspicion of foreign body ingestion with no history of vomiting, retching behavior. Appetite was normal. No difficulty in voiding feces and urine. All the vital parameters were normal. Ultrasonographic examination revealed the presence of fluid filled, distended stomach with reduced gastric motility. Lateral and ventro-dorsal views of abdominal radiographs revealed the presence of radio-opaque elongated foreign body in the stomach. Under general anesthesia, a small nick incision was taken over the stomach after fixing the foreign body in position to prevent its migration and retrieved out. The retrieved foreign body was Sewing needle with a long thread. Omentalization over the sutured area of stomach was performed for rapid healing. The incised portions were sutured in a standard manner. Antiseptic dressing and bandaging were performed regularly. Post operatively the dog was treated with fluid therapy, antibiotic (inj. ceftriaxone @ 20 mg/kg, IM) for 5 days along with NSAIDs (inj. meloxicam @ 0.3 mg/kg, IM), orally sucralfate syrup was given as oral antacid. Initially dog was kept under fluid therapy for 5 days and on 6<sup>th</sup> post-operative day semisolid diet was introduced, on 11<sup>th</sup> post-operative day soft solid food was given. Sutures were removed on 10<sup>th</sup> post-operative day. The dog recovered uneventfully without any further complications.

**Keywords:** Successful surgical retrieval, Shih Tzu dog, ultrasonographic examination

### Introduction

Foreign body ingestion is more common in dogs among animals. Young dogs are more prone to foreign body obstruction because of its voracious, indiscriminate and fast gulping nature of feeding habits (Fossum 2007) [2]. Lack of awareness by the pet owners regarding the foreign body ingestion by their pets and no symptoms being exhibited by pet after ingestion results in a dangerous consequence. Based on the type of the foreign object the clinical signs will be evident. Foreign bodies may migrate to distant locations and obstruct the gastro intestinal tract partially or completely depending on the size and shape of the object. Linear and elongated foreign bodies mostly obstruct incompletely when compared to bigger objects. Sharp objects like sticks, sewing needles etc. may penetrate the lodged and adjoining organ and causes damage (Emily J Cottam 2015) [1]. This case describes about the diagnostic and surgical management of linear foreign body obstruction in stomach of a Shih Tzu dog.

### Materials and Methods

A male Shih Tzu dog of 8 months old was presented to the Veterinary Clinical Complex with owner suspicion of foreign body ingestion with no history of vomiting and retching behavior. Feed and water intake was normal with no difficulty in defecation and urination. All the vital parameters were within in the normal limits. Ultrasonographic examination of abdomen revealed the presence of fluid filled, distended stomach with reduced gastric motility and intestines were normal (fig. 1). Lateral and ventro dorsal views of abdominal radiographs revealed the presence of radio-opaque elongated sharp foreign body in the fundus of the stomach (Fig. 2 and 3).

**Surgical Procedure**

The dog was premedicated with atropine sulphate (@ 0.02 mg/kg, SC) and induction was done with combination dose of inj. xylazine (@ 1 mg/kg, IM) and inj. ketamine (@ 10 mg/kg, IM) and maintenance of anesthesia was done by inj. propofol (@4.4 mg/kg, IV) to the effect. Standard pre-operative protocol was followed to avoid sepsis. The dog was positioned on dorsal recumbency and cranial mid-ventral incision was taken from one inch below the xyphoid cartilage to umbilicus (fig. 4). The laparotomy wound edges were retracted to exteriorized the stomach smoothly (fig. 5). On manual palpation elongated sharp foreign body (fig. 6) was identified and hemostatic forceps was used to fix it in one place to avoid migration (fig. 7). Instead of linear incision over the stomach, gastrotomy was performed by a small nick incision at the one end of the fixed foreign body and was retrieved out (fig. 8) safely without causing much surgical damage to the stomach. The retrieved foreign body was Sewing needle with a long thread (15 cms) (fig. 9). Gastrotomy wound was sutured using 2-0 Vicryl by Cushing’s suturing pattern (fig. 10). For the fast-healing omentalization (fig. 11) was performed over the sutured area of the stomach. Laparotomy wound was sutured in a standard manner by using Vicryl. Further, skin was apposed with polyamide (nylon) 2-0 in a cross-mattress pattern (fig. 12). Antiseptic dressing and bandaging (fig. 13) were done as per standard protocol. Post operatively the animal was treated with fluid therapy, antibiotic (inj. ceftriaxone @ 20 mg/kg, IM) for 5 days along with NSAIDs (inj. meloxicam @ 0.3 mg/kg, IM), orally sucralfate syrup was given as oral antacid. Initially dog was kept under fluid therapy for 5 days and on 6th post-operative day semisolid diet was introduced, on 11th post-operative day solid food was given. Sutures were removed on 10th post-operative day. Dog recovered uneventfully without any further complications.



**Fig 3:** Radiograph – Ventrodorsal view of abdomen. Presence of foreign body in stomach.



**Fig 4:** Cranial mid-ventral Skin incision



**Fig 1:** Distended stomach with impaired gastric motility.



**Fig 5:** Exteriorization of stomach



**Fig 2:** Radiograph – lateral view of abdomen presence of foreign body in stomach



**Fig 6:** Palpation of Foreign body at fundus of stomach.





**Fig 7:** Nick incision was taken over greater curvature of fundus by fixing foreign body in position using hemostatic forceps.



**Fig 11:** Omentalization over the sutured gastric area.



**Fig 8:** Foreign body retrieval from stomach



**Fig 12:** Closure of skin incision by Cross mattress suturing pattern.



**Fig 9:** Sewing needle along with long thread



**Fig 13:** Antiseptic dressing and Bandaging was done over surgical site.



**Fig 10:** Incision on the stomach was sutured in Cushing's Suture pattern.

### Discussion

The linear foreign bodies like threads, sharp foreign objects like sewing needles (Radhakrishna Rao *et al.*, 2020) [6], bone pieces and playing objects (Papazoglou *et al.*, 2003) [5] like toys, puffer balls (Vijayakumar *et al.*, 2018) [7], marbles, keys, bottle caps (Mohanambal *et al.*, 2018) [4] etc., were reported by earlier studies in GIT. Foreign body obstruction in stomach usually induces vomiting, retching behavior, anorexia and progressive emaciation in chronic conditions. In the current case report the animal was not exhibiting any of these clinical signs, foreign body lodges in the fundus of stomach usually not exhibit any clinical signs, similarly if foreign body lodges in pyloric portion of the stomach leads to impaired gastric emptying (Mohanambal *et al.*, 2018) [4]. In the present study, ultrasonography of the stomach revealed distention and delayed/reduced gastric motility, which was due to foreign body obstruction in the pyloric area of the stomach, further the same was confirmed by radiography and surgery. Usually, blunt foreign bodies present in the stomach can be easily retrieved by endoscopy (Kelawala *et al.*, 2015 and Vijayakumar *et al.*, 2018) [3, 7] but in the current case the foreign body was sharp object, so it was decided to proceed by surgical correction. Sharp foreign bodies may perforate the

stomach or intestinal wall resulting in peritonitis (Papazoglou *et al.*, 2003 and Fossum 2007)<sup>[5, 2]</sup> or may enter into the next segment of alimentary tract. In case of (Radhakrishna Rao *et al.*, 2020)<sup>[6]</sup> report, the foreign body sewing needle reached to the level of rectum due to the increased peristaltic movements, pierced the dorsal wall of rectum resulting in painful defecation and was retrieved successfully by manipulating with finger under anesthesia. Foreign bodies without sharp points reaching to the level of colon and rectum may easily expelled out along with the faeces (Fossum 2007)<sup>[2]</sup>. In this case because of sharp nature of ingested linear foreign body surgical treatment was performed successfully instead of endoscopic retrieval.

### Conclusion

In conclusion, the ingested sewing needle along with the thread was retrieved surgically. The dog recovered uneventfully without any further complications.

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