



Clinical Report

Successful Surgical Removal of Crop Foreign Body in a Common Mynah (*Acridotheres tristis*): A Case Report

Hooman Mesgarani¹, Hossein Kazemi Mehrjerdi², Ali Mirshahi², Jamshid Razmyar²

Abstract

Case description- A 6 month old common mynah (*Acridotheres tristis*) of unknown sex, weighing 200 g, was referred to Veterinary Teaching Hospital of Ferdowsi University. The mynah had history of swallowing a foreign body for one day.

Clinical findings- Radiopaque foreign body was seen from thoracic inlet to caudal part of the celomic cavity in the lateral and ventrodorsal radiographs.

Treatment and outcome- Because the foreign body can cause obstruction and this condition is life threatening, the surgical removal was done. The crop was approached through 3 cm incision to remove the foreign body. Exploration in the crop was done and the foreign body was removed carefully. The crop incision was sutured in one simple interrupted layer. Procedure resulted in a favorable outcome for the bird.

Clinical relevance- Successful surgery of foreign body has not been described in mynah frequently. According to circular-like foreign body that extends from crop to celomic cavity this situation is a rare case.

Key words- *Acridotheres tristis*, Foreign Body, Surgery.

Case Description

An unknown sex, six month old mynah which weight 200 g, was presented to Veterinary Teaching Hospital of Ferdowsi University of Mashhad with a history of one day anorexia and depression. According to the owner's statement, the mynah feeds on rice, trade food, and occasionally fruit. They keep the mynah in the birdhouse lonely, but for a few hours a day is free. Accidentally its owners saw the mynah had eaten a hair ribbon. Afterwards, the mynah refused to eat and drink and depressed. Additional information could not be obtained from keepers. On physical examination specific symptoms was not observed.

Clinical Findings

Clinical signs include anorexia, depression, and decreased fecal output.

¹Resident of Surgery, Faculty of Veterinary Medicine, Ferdowsi of Mashhad, Mashhad, Iran.

²Departments of Clinical Science, Faculty of Veterinary Medicine, Ferdowsi University of Mashhad, Mashhad, Iran.

Address all correspondence to Dr. Hooman Mesgarani (DVM), E-mail: ho.mesgarani@gmail.com

Plain radiographs of the whole body were taken to check the foreign body location. Radiopaque foreign body that extended from crop to caudal celomic cavity was seen in the lateral and ventrodorsal radiographs (Fig 1 A, B). Its anatomic location suggested the proximal end (metallic part of foreign body) was in crop. The proventriculus was dilated due to a disturbance in the peristaltic activity of the gastrointestinal tract (Fig 1 A, B).

Treatment and Outcome

The mynah was induced by anesthetic mask with isoflurane (1-3%; Isoflurane, Nicholas Piramal, London, UK) in oxygen then was intubated with an uncuffed 2.5 mm endotracheal tube and anesthesia was maintained with isoflurane in 100% oxygen by a rebreathing circuit. The mynah is placed in dorsal recumbency on heating pad to avoid hypothermia during anesthesia.

The prepared area should extend slightly around the crop. Feathers were raked up on the incision site. For asepsis preparation povidone iodine 10% was used, and a perforated drape was used on operated field.

The crop was approached through a 3 cm skin incision to remove the foreign body. Two stay sutures were placed on the crop wall. Then a stab incision was done over the crop and the incision was extended roughly half the length of the skin incision by Metzenbaum scissors. Exploration in the crop was done by a small Mosquito and the foreign body was isolated from the ingluviotomy incision. Because the foreign body was extended from the crop to celomic cavity, it was gently removed from ingluviotomy incision to avoid damage to the isthmus and other parts of the digestive system. The ingluviotomy incision was sutured in one simple interrupted layer with 5/0 Vicryl, then skin incision was closed aside by a simple interrupted suture pattern with 4/0 Vicryl. The bird recovered uneventfully.

Owners were recommended to change the diet into the soft food. Enrofloxacin (15 mg/kg PO q12h; Enroflukat 10% powder) for seven days was administered postoperatively. There was not any complaint from owner after surgery and the result was uneventfully.

On gross examination, the foreign body sized in 7.5 cm was presented. It was hair-elastic ribbon (surgery finding) (Fig 1 C).

Clinical Relevance

We report the successful surgical removal of foreign body from a crop in common mynah. It is generally accepted that gastrointestinal foreign bodies are common in dogs and cats, but there are few reports of the foreign bodies in mynah and psittacine birds. This behavior may be the result of their curious nature and their uncontrollable pumping for food.¹

Some reports show that environmental stress such as significant changes of habitation may result in foreign body ingestion.²

In avian species, foreign body obstruction are most commonly observed in group of flightless, large birds of the superorder Palaeognathae, though impactions assigned to the ingestion of bedding or other precinct materials have also been accounted in juvenile psittacines and turkeys.³

Typical locations where the foreign bodies most commonly trapped are crop, proventriculus, or ventriculus, although linear foreign bodies can continue into the intestines. Diagnostic techniques for rule out foreign body obstruction from other diseases such as mycobacteriosis, PDD, diffuse candidiasis, toxicosis (e.g. lead poisoning), neoplasia of the proventriculus or ventriculus, and diffuse papillomatosis are through clinical signs, radiological findings, and laboratory tests. However, in this report the history suggested foreign

body obstruction and we relied on history and radiological findings.^{4,1}

Anorexia, weight loss, lethargy, shifting leg lameness is some of clinical symptoms in such cases. In our case we saw only anorexia and depression because the bird was referred 24 hours following the ingestion of the foreign body. In previously reported foreign body obstruction usual radiologic findings included dilatation of the proventriculus and intestine, deferment emptying of contrast material, and proventriculus and ventriculus intraluminal finding defects.^{6,1}

The foreign body was removed successfully whereby crop and skin incision was apposed and sutured with no problem.

In Lloyd study ventricular foreign body that consisted of plastic matting was removed successfully by staged endoscopic removal assisted by natural casting material, but because of the position and size of the foreign body and the available facilities we could not use endoscopic removal of the foreign body. In prepared conditions staged endoscopic removal of foreign body in birds is an alternative to ventriculotomy.⁵

The bird was intubated with tracheal tube size 2.5, to prevent tracheal collapse and for purpose of delivering isoflurane and oxygen. Although in some studies they used anesthetic mask instead of intubating the bird.

Although a heating pad was used to control hypothermia, only feathers on the crop were removed to minimize the postoperative hypothermia and following complications. Postoperative management importantly influences the outcome of the surgery. Some of important postoperative care included restricted the bird for prevention of self trauma, appropriate analgesic drugs, thermal and nutritional sustain, as well as stress minimization.⁶

In one study postoperative care consisted of enrofloxacin (15 mg/kg PO q12h), carprofen (2 mg/kg PO q12h), and a balanced avian feeding formula (12 ml/kg PO q12h via gavage tube).⁷ In this case report treatment continued with enrofloxacin (15mg/kg PO q12h; Enroflukat 10% powder), modification of food regime (soft food) and decreased activity for two weeks. Type of the foreign body, history, the available tools and ability of the surgeon affect the approach to crop foreign bodies in birds.⁵

In this mynah, removal of the foreign body was done using a crop approach because of the position of the object and the tools available. In this surgery a prognosis was guarded, but resulted in approval outcome for the mynah.

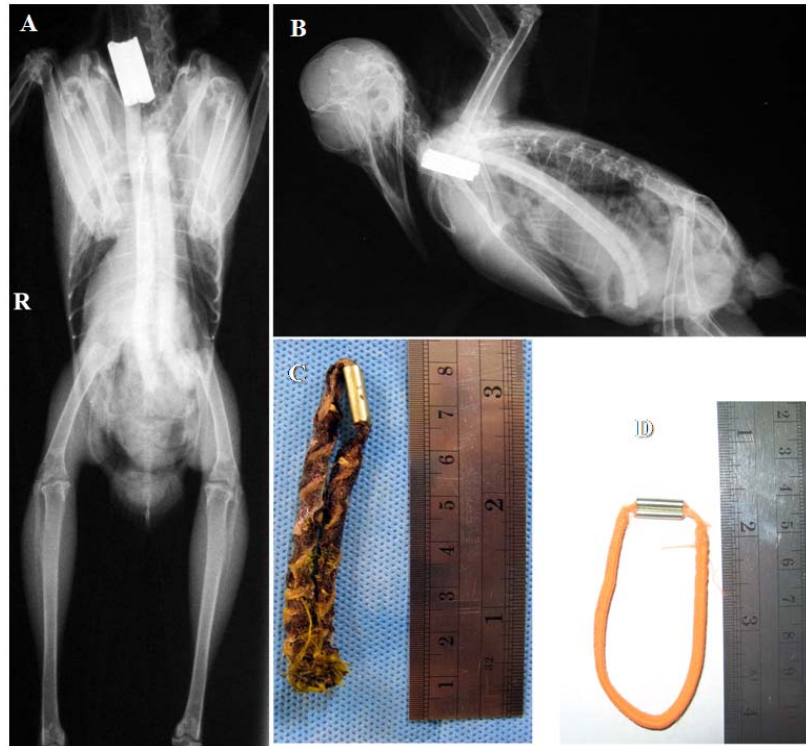


Figure 1- Radiographic images of a 6 month old common mynah that has ingested a foreign body. A, B, Ventrodorsal and lateral whole body radiographic images that show a radiopaque foreign body in crop and lower parts of gastrointestinal. C, After surgery, swallowed hair elastic ribbon was removed. D, Another hair elastic ribbon of owner that has not been swallowed.

References

1. Adamcak A, Laurie R, Katherine E, et al. Intestinal string foreign body in an adult Umbrella Cockatoo (*Cacatua Alba*). *J Avian Med Surg* 2000; 14(4):257–263.
2. Morishita TY, Aye PP, Harr BS, et al. Crop impaction resulting from feather ball formation in caged layers. *J Avian Dis* 1999;43(1):160-163.
3. Kinsel MJ, Briggs MB, Crang RF, et al. Ventricular phytobezoar impaction in three micronesian kingfishers (*Halcyon cinnamomina cinnamomina*). *J Zoo Wildl Med* 2004;35(4):525-529.
4. Evans KL, Smeak DD, Biller DS, et al. Gastrointestinal linear foreign bodies in 32 dogs: a retrospective evaluation and feline comparison. *J Am Anim Hosp Assoc* 1994;30: 445-450.
5. Lloyd C. Staged endoscopic ventricular foreign body removal in a Gyr Falcon (*Falco rusticolus*). *J Avian Med Surg* 2009;23(4):314–319.
6. Hayati F, Ahrari Khafi MS, Salmanzadeh N, et al. Surgical removal of a tube-like foreign body from an Alexandrine Parakeet (*Psittacula Eupatria*) using a ventricular approach: a case report. *J Global Veterinaria* 2012;9 (6):696-699.
7. Clayton LA, Ritzman T. Endoscopic-assisted removal of a tracheal seed foreign body in a Cockatiel (*Nymphicus hollandicus*). *J Avian Med Surg* 2005;19(1):14-18

چکیده

جراحی موفقیت آمیز خروج جسم خارجی از چینه‌دان مرغ مینا

هومن مسگرانی*^۱، حسین کاظمی مهرجردی^۲، علی میرشاهی^۲، جمشید رزمیار^۲

^۱ رزیدنت جراحی و بیهوشی، گروه علوم درمانگاهی دانشکده دامپزشکی دانشگاه فردوسی مشهد، مشهد، ایران.
^۲ گروه علوم درمانگاهی دانشکده دامپزشکی دانشگاه فردوسی مشهد، مشهد، ایران.

توصیف بیمار- یک مرغ مینای معمولی بدون اطلاع از جنسیت، با وزن ۲۰۰ گرم، به بیمارستان آموزشی تخصصی دانشگاه فردوسی مشهد ارجاع داده شد. مرغ مینا سابقه بلع جسم خارجی را به مدت یک روز داشت. یافته‌های بالینی- جسم خارجی دایره ای شکل از مدخل سینه‌ای تا انتهای محوطه بطنی در رادیوگراف های جانبی و شکمی-پشتی مشاهده شد.

درمان و نتیجه- به دلیل اینکه جسم خارجی می‌تواند باعث انسداد شود و چنین شرایطی تهدید برای زندگی است، برداشت جراحی توده انجام شد. برای برداشت جسم خارجی برش ۳ سانتی‌متری چینه دان صورت گرفت. کاوش در چینه دان صورت گرفت و جسم خارجی با دقت برداشته شد. برش چینه دان با الگوی ساده تک در یک لایه بخیه شد. نتیجه این جراحی قابل قبول بود.

کاربرد بالینی- جراحی موفقیت آمیز برداشت جسم خارجی در مرغ مینا به صورت مکرر گزارش نشده است. بر اساس حضور جسم خارجی دایره‌ای شکل که از چینه‌دان تا حفره شکمی امتداد یافته بود، این مورد نادر بود.

کلید واژگان- جسم خارجی، جراحی، مرغ مینا