

Surgical removal of a ventricular foreign body from a common myna (*Acridotheres tristis*): a case report

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ABSTRACT: A common myna (*Acridotheres tristis*) was presented to Veterinary Teaching Hospital, School of Veterinary Medicine, Tehran University after swallowing a needle. Radiography and physical examination revealed a metal foreign body within the body with its distal end in the ventriculus. Surgical removal by ventriculotomy under general anesthesia was attempted. Six months of follow up study revealed no complications.

Keywords: common myna; *Acridotheres tristis*; foreign body; ventriculotomy

Foreign bodies in the gastrointestinal tract have been reported in a wide variety of animals. In avian species, foreign bodies are most commonly observed in zoo birds, ratite birds, and juvenile psittacine birds.

The common myna or Indian myna (*Acridotheres tristis*) also sometimes spelled *mynah*, is a member of the starling family. It is a species of bird native to Asia and its initial home range spanned from Iran, Pakistan, India and Kazakhstan to Malaysia and China. To our knowledge, there are no other reports of successful foreign body removal through ventriculotomy in these species.

Case description

A one-year old common myna (*Acridotheres tristis*) was referred for a history of foreign body ingestion. The bird was caged alone; its diet consisted of fruits, vegetables and seeds. The bird had no prior history of disease. The owner reported that it had been playing with a needle which was placed by him in its cage; shortly after he then found the bird with cotton in its beak. On physical examination the bird looked normal and only the cotton was observed (Figure 1). Survey radiographs of the body were taken. Lateral and ventrodorsal radiographs showed a metal foreign body within

the body with its distal end seemingly in the ventriculus and its proximal end extending to the right pectoral region pointing to the right shoulder joint (Figures 2 and 3). Because the needle eye was located distally, pulling the needle out by the cotton attached to it might have caused significant injuries. We therefore decided to remove it through a ventral midline celiotomy. The bird was given Ringer's solution (50 ml/kg *s.c.*; Pharmaceuticals Production Company, Tehran, Iran) and anesthe-



Figure 1. Myna with cotton in its beak

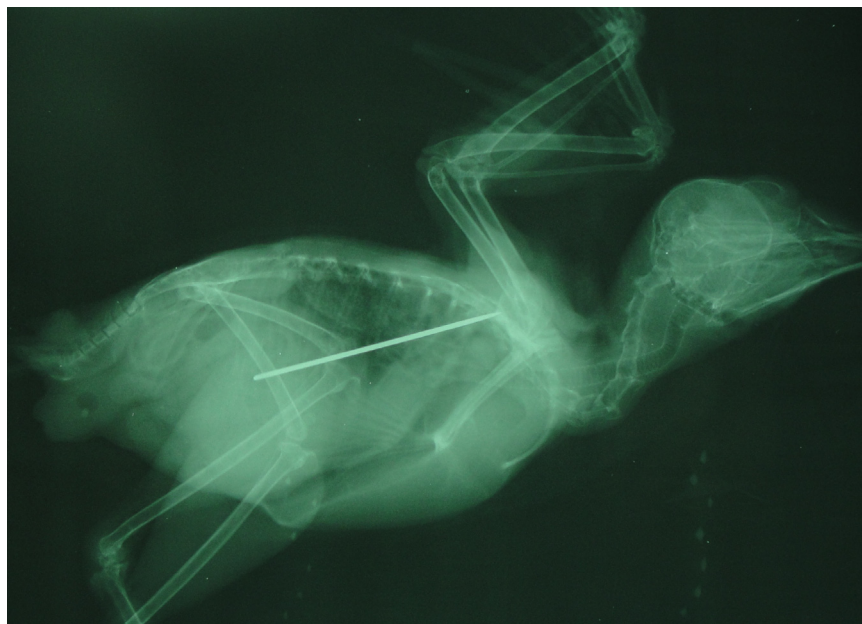


Figure 2. Lateral radiograph of the common myna, showing a large metal foreign body (needle) within the body

tized with isoflurane (1%–3%; Isoflurane, Nicholas Piramal, London, UK) and oxygen and placed in dorsal recumbency with the head raised about 30 degrees on a heating pad. The wings were reflected dorsally while the legs were restrained and abducted in a caudal direction. The feathers at the incision site were plucked. The skin was prepared for aseptic operation using Povidone iodine solution and alcohol and draped at the level of the operation field. The skin and linea alba were incised separately. We packed off the abdomen behind the ventriculus with a saline-soaked gauze to minimize the effect of leakage. An initial stab incision was made which was extended with Metzenbaum scissors. Exploration in the ventricular cavity was carried out using a small mosquito and the needle and its attached cotton were removed carefully (Figure 4). The ventricular incision was sutured in two continuous layers (opposed, then Cushing) with 4/0 Vicryl. Then the linea alba and skin were

closed separately by a simple continuous suture pattern using the same suture material. Recovery was uneventful.

Postoperative management consisted of diet modification (soft food) and decreased activity for two weeks after surgery. Enrofloxacin (10% 10 mg/kg *p.o.* Lortryl, Damloran, Razak, Iran) for seven days and aspirin (325 mg per 250 ml drinking water) for three days were administered postoperatively. The bird was re-evaluated on the second and sixth months postoperatively and no complications were observed.

DISCUSSION AND CONCLUSIONS

Gastrointestinal foreign bodies are common in dogs and cats (Evans et al., 1994). Foreign body ingestion has also been reported in a variety of birds, including companion birds, zoo birds, poultry and ostriches, and birds in the wild (Christine

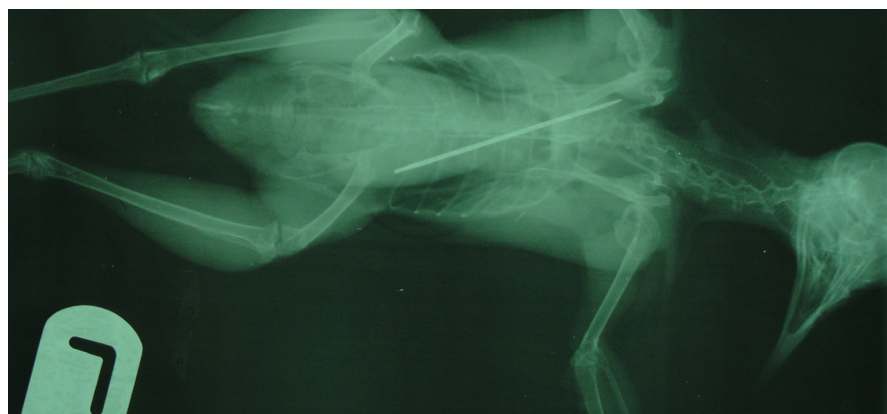


Figure 3. Ventrodorsal radiograph of the common myna described in Figure 2, showing the needle

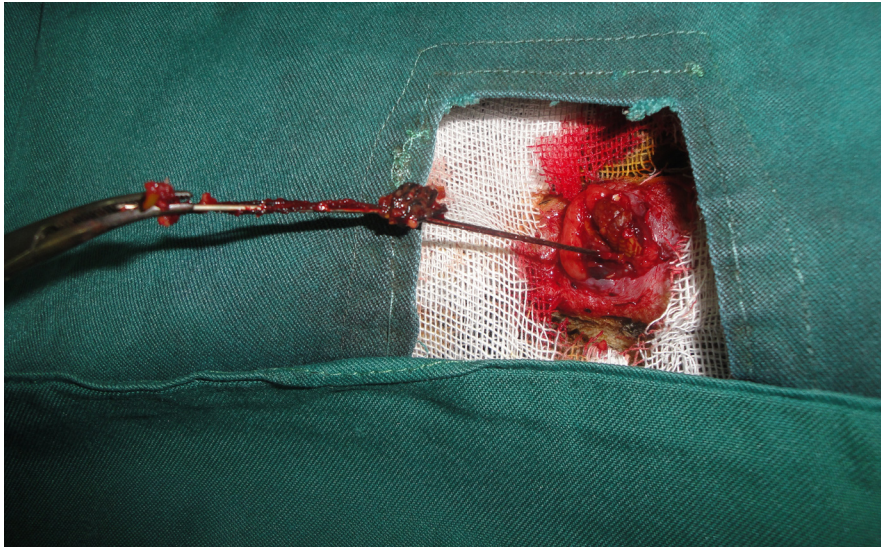


Figure 4. Pulling the needle and its attached cotton out using ventriculotomy

et al., 2009). Foreign bodies are most commonly found in the crop, proventriculus, or ventriculus, although linear foreign bodies can extend into intestines (Segna, 1979; Wells, 1984; Edwards et al., 1992; Lumeij, 1994; Adamcak et al., 2000; Wagner, 2005). Foreign body ingestion in birds may be the result of their curious nature or their compulsive pumping for food (Altman, 1992). Additionally, some reports show that environmental stressors such as dramatic alterations of housing may result in foreign body ingestion (Morshita, 1999).

Foreign bodies in the gastrointestinal tract are usually diagnosed through history, clinical signs, laboratory tests and radiological findings. Clinical signs reported in such cases include anorexia, weight loss, lethargy, shifting leg lameness, and reversion to neonatal behavior, which indicate multisystemic disease. This makes it difficult to localize the disease to the gastrointestinal tract. Common radiological findings in previously reported cases include dilation of the proventriculus and intestine, delayed emptying of contrast medium and intraluminal finding defects in the proventriculus and ventriculus. According to previous records, blood test results are non-specific (Adamcak, 2000). This myna did not show any of the above-mentioned clinical signs, and radiological findings merely showed a metal foreign body within the body because of the short period of time between swallowing of the needle and referral to the hospital. Laboratory tests were not performed because of the clear history and the cotton in its beak and radiographs confirmed the presence of the needle; moreover, we were constrained by time due to the precarious situation of the bird.

The needle was removed successfully using a ventriculotomy. Although ventriculotomy is generally avoided, in view of the highly muscular walls (the physiological muscular activity can pull sutures out of the tissue) and the inability to form an inversion closure (Forbes, 2002), because of the nature of the foreign body and available tools, a ventriculotomy was performed.

During any celiotomy procedure, the bird's head should be raised at 30–40 degrees to prevent any surgical irrigation fluid from entering the lung field. The bird was not intubated because of the increased risk of blockage of the small-diameter tubes by respiratory secretions (Forbes, 2002). Minimizing the area of feather removal, while still allowing intraoperative control of sepsis (Forbes, 2002), is beneficial in the control of intraoperative or postoperative hypothermia, so only 1 cm around the incision site was removed. Moreover, heat from a heating pad was used to prevent hypothermia. Postoperative management significantly affects the outcome of such procedures. Prevention of self-trauma, a rapid recovery, sufficient analgesia, fluid, thermal and nutritional support, as well as the minimization of stress, are vital (MacWhirter, 1994).

The approach to ventricular foreign bodies in birds is affected by the nature of the foreign body, the clinical signs, the available tools, and preference of the surgeon (Lloyd and Med, 2009). In this myna, removal of the needle was achieved using a ventricular approach because of the nature of the object and the tools available. This procedure, which carries a guarded prognosis, was a reasonable option and resulted in a favourable outcome for the bird.

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