

Endoscopic Removal of Esophageal Foreign Body in a Moluccan Cockatoo (*Cacatua moluccensis*)

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Abstract: A thirty-month-old male Moluccan Cockatoo (*Cacatua moluccensis*) with mild anorexia was referred. Through physical examination, foreign body was palpated at the crop region. Radiopaque, lineal foreign body was visualized on the lateral radiographs of the thoracic esophageal region. The patient was definitively diagnosed esophageal foreign body which is ingested feeding tube. The foreign body removal was undertaken using a flexible endoscope and a grasping forcep without any other complications. This case report demonstrated that successful esophageal foreign body removal with endoscopy in birds.

Key words: cockatoo, endoscopy, foreign body.

Introduction

Esophageal foreign bodies are common problem in pet birds because of their strong beak, continual chewing habits, curious nature and also owner's carelessness especially in psittacines. Various foreign bodies have been described, including feeding tube, cage substrate, grit, heavy metal, or large food items that are difficult to pass beyond the level of the crop (1,2). Several techniques for removal of esophageal foreign bodies in birds have been used and the mainly used techniques are ingulviotomy or endoscopic retrieval (1,2,7).

Endoscopy has been the practice for variant purposes in birds since 1970's. One of the most common indications of avian endoscopy is foreign body removal (7). This technique is safe, effective, and rapid method for the esophageal foreign body removal.

Case report

A thirty-month-old male Moluccan Cockatoo (*Cacatua moluccensis*) with mild anorexia was referred. Historically, the patient ingested feeding tube one month ago. There was no history of diarrhea, regurgitation, vomiting, and respiratory distress. The bird was alert, weighted 500 g with a body condition score of 3 (4). Physical examination revealed palpated foreign body in the crop.

On hematologic evaluation, no significant abnormalities were noted. Right lateral and ventrodorsal (VD) radiographs

of the thorax and the abdomen were taken for confirmation of the esophageal foreign body. On the lateral thoracic radiograph, a radiopaque lineal foreign body was seen in the thoracic esophagus region, from crop to proventricle (Fig 1). The patient was tentatively diagnosed esophageal foreign body ingested feeding tube according to history, physical examination, and radiographic findings. Therefore we considered retrieval of foreign body via endoscopic approach which is less invasive method than ingulviotomy.

Food and water withheld for 4 hours before endoscopic examination to prevent regurgitation (3,5,6). Anesthesia was maintained with 2% isoflurane (TerrellTM, Minrad INC., USA) in oxygen using a commercial circle system (5). We used 5 mm diameter flexible endoscope (EB-250S System, Fuji Photo Optical CO., LTD, electronic video endoscopes) which is commonly used for respiratory examination in small animal practice. For the endoscopic examination of the esophagus and crop, the patient was placed on dorsal recumbency and the neck is fully extended. Endoscope was slowly inserted to the cervical esophagus. The cervical esophagus was normal, but the tip of feeding tube was observed at the crop region (Fig 2A). It was gently held with grasping forcep (Fig 2B) and the lineal yellowish feeding tube was successfully removed by the application of the endoscopy (Fig 3). Following endoscopy, the bird's clinical sign was resolved and still in good health.

Discussion

As previously stated, esophageal foreign bodies in birds are common problem. Birds with an ingested foreign body

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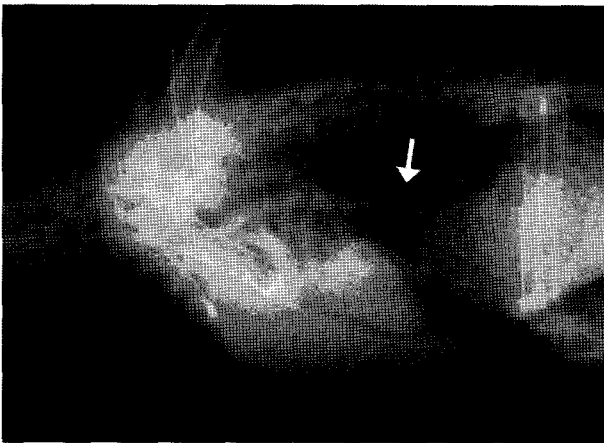


Fig 1. Radiopaque lineal foreign body is revealed from the crop to the proventricule region on the right lateral radiographic finding.

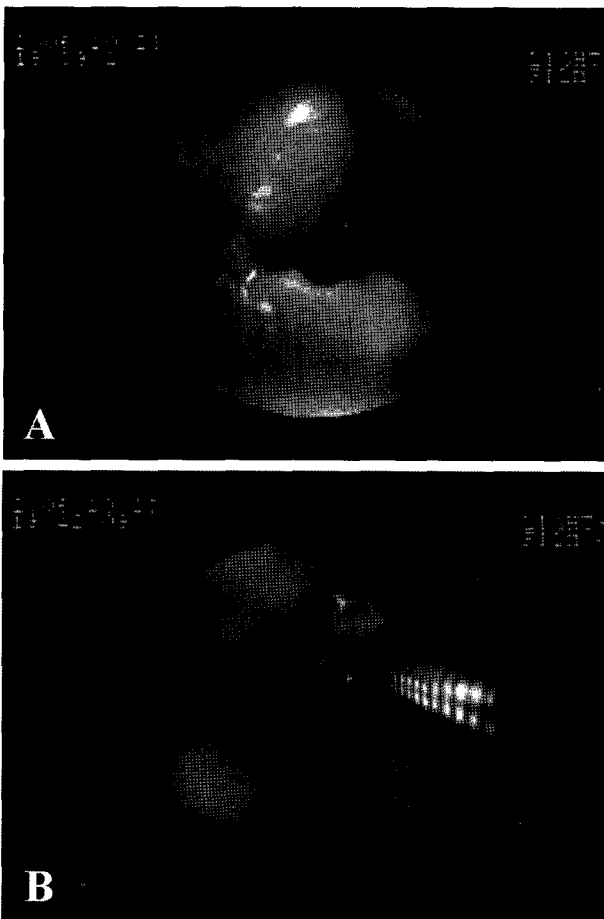


Fig 2. Endoscopic findings A: Tip of the yellowish feeding tube is showed at the crop region. B: Feeding tube is removed using grasping forcep.

may be asymptomatic, or they maybe clinically ill with anorexia, regurgitation, depression and secondary infection (2,4). One case of feeding tube foreign body has been described

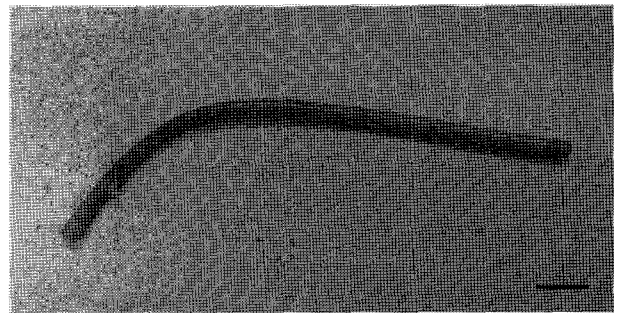


Fig 3. Lineal yellowish feeding tube (Scale bar = 1 cm).

(2). That bird was clinically healthy just like this case. Therefore, thorough physical examination and whole body radiographs are emphasized for effective diagnosis. Diagnosis of the crop foreign bodies could be obtained on palpation during a physical examination (1). The neck should be palpated to the point of the thoracic inlet to evaluate the cervical esophagus, trachea, and crop (4). The crop is located right side of cranial to the thoracic inlet. The crop can be transilluminated, foreign bodies may be identified application of alcohol at the skin of crop region. However, crop foreign bodies may require survey radiographs or radiographs with contrast media for definitive diagnosis (1).

Several techniques for removal of esophageal foreign bodies in birds have been used. The mainly used techniques are ingulviotomy (crop incision) or endoscopic retrieval (1,2,7). Another removal technique involves flushing the foreign material out of the crop (1), but this method has high risk of aspiration pneumonia than other methods. Ingulviotomy is the most common indication for the crop foreign body and easily performed with relatively low complication (7). However, this technique is uncomfortable and invasive to birds. Endoscopy is non-invasive technique and more secure and appealing to owner compared with surgical intervention. Therefore, endoscopic approach is safer, faster, and more effective method for the esophageal foreign body removal in birds.

In conclusion, esophageal foreign body was diagnosed through physical examination and radiographic finding and this is resolved using endoscopic retrieval. This case report demonstrated that endoscopy could useful method of the esophageal foreign body removal in birds without complication. This method is the most safe, effective, and fast method than any other methods, especially ingulviotomy.

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몰루칸 앵무새에서의 내시경을 이용한 식도 이물 제거 일례

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요 약 : 13개월령의 수컷 몰루칸 앵무새가 경미한 식욕부진을 주 증상으로 하여 건국대학교 수의과대학 부속 동물병원에 내원하였다. 신체 검사에서, 식도 이물이 소낭 부위에서 촉진 되었다. 흉부 방사선 검사에서 흉부 식도 부위에 위치한 선상의 식도 이물이 확인되었다. 이에 따라 환자는 먹이용 튜브에 의한 식도 이물로 진단되었다. 식도 이물은 내시경과 겸자를 이용하여 다른 부작용 없이 제거되었다. 이 중례 보고는 새에서 내시경을 이용한 효과적인 식도 이물 제거를 보여준다.

주요어 : 앵무새, 내시경, 식도 이물