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Foreign body oesophageal obstruction in a goose

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Abstract

Oesophageal obstruction is the partial or complete blockage of the oesophagus by ingested foreign bodies. This study documents a case of 14-month old goose presented to the Veterinary Clinic with a complaint of dying without premonitoring signs. Physical examination of the dead bird showed no obvious signs of sickness apart from ruffled feathers. Post mortem examination indicated the presence of broken bottle and super sack sponge lodged between the oesophageal junction and ventriculus, with resultant prominent grooves and keratinisation of the oesophageal wall. Histopathology showed phagocytic infiltration and necrosis of epithelial and muscular cells of the oesophagus, while the trachea had oedema and calcification. Apparently, the bird died from suffocation and starvation due to the foreign materials in its oesophagus. The client was advised to ensure clean environment and proper disposal of waste to reduce chances of his scavenging animals consuming foreign materials.

Keywords: Foreign body, goose, obstruction, oesophagus

1. Introduction

Oesophageal obstruction is the partial or complete blockage of the oesophagus by ingested foreign bodies. Ingested gastrointestinal (GI) foreign bodies and food bolus impaction are conditions often encountered in domestic animals. It usually occurs due to the current trend of widespread use and indiscriminate disposal of polythene bags and other non-biodegradable materials which constitute a predisposing factor to the development of this condition [1]. The condition is common in dogs, sheep and goats, and has also been reported in sheep and goats slaughtered in Lunar Abattoir Ethiopia, [2]. It is however, not commonly reported in birds.

Foreign bodies like bones, hooks, needles, mango choke, polythene bags and other material are common causes of obstruction in the oesophagus. Obstruction due to bones, fishhooks and needles occur commonly in dogs and cats, while obstruction due to mango choke, polythene bags and other materials are common in cattle, sheep and goats, but not common in birds.

Animals pick up foreign bodies from the environment through, grazing and scavenging habits which results to the blocking of the oesophagus [3]Walters, resulting to inability of food to pass into the stomach where digestion occurs. In birds, threads of feed bags looped around the base of the tongue and passing down the esophagus has been associated with dysphagia and respiratory distress, the condition has been reported in chickens, goose, ducks, pigeons and ostriches [4].

The clinical signs observed in oesophageal obstruction depend on the location of the foreign body and on the degree and duration of obstruction [5]. Birds may display anorexia, respiratory distress and may be depressed, cold, dehydrated with palpable swelling in the neck area [6]. Foreign body obstruction or impaction is generally indicative of the need to avoid littering the environment with plastic bags and other indigestible materials, which could pose serious health problem for free grazing and scavenging animals.

2. Materials and Methods

2.1Case History

A 14-month old dead goose was brought to the Avian Clinic of Ahmadu Bello University Veterinary Teaching Hospital with a complaint that two out of five geese were found dead without any premonitoring signs. The other dead goose has been disposed off, while one was brought to the clinic for evaluation and advice. The owner also kept turkeys, ducks and local chicken, all of which were kept under semi-intensive conditions.

The medical histories indicated that the birds had no vaccination history.

2.2 Clinical Examination

Physical examination of the dead goose indicated ruffled feathers, normal combs and wattles, with the presence of lean pectoral muscles.

2.3 Specimen collection

Samples of the upper and lower parts of the oesophagus and trachea were collected and sent to the pathology laboratory for sectioning and determination of lesions.

2.4 Post Mortem Examination

The post mortem examination indicated a piece of bottle and sponge lodged within the oesophagus at the junction between the oesophagus and the proventriculus (plate 1). The upper oesophagus was clean and normal, while the lower oesophagus had prominent grooves that were keratinized (plate 2) and a big super sack sponge was found at the lower oesophageal sphincter near the proventriculus.

The crop was normal and the proventriculus showed no congestion, but the oesophagus had a broken bottle piece and part of the super sack plastic sponge (plate 3)



Plate 3: Foreign bodies removed from the oesophagus (Sponge and a piece of broken bottle).

2.5 Histopathology

The oesophagus showed the presence of inflammatory cells with necrosis of the epithelial cells and muscle in haematoxylin and eosin (H and E) stain (plate 4).

The trachea showed oedema of lamina propria (e) (plate 5).



Plate 1: Lower oesophagus with foreign bodies (arrowed).



Plate 4: Photomicrograph of the oesophagus showing inflammatory cells (ip), necrosis of the muscle (nm) and oedema (e) (H&E) X400



Plate 2: keratinized and scarified oesophageal mucosa (arrowed)

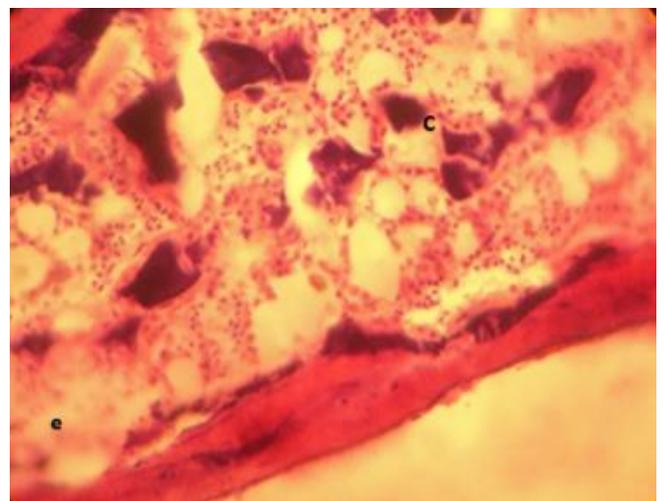


Plate 5: Photomicrograph of the trachea showing oedema of lamina propria (e)

3. Management

No treatment plan was developed for the client. However, he was advised to provide adequate feeding for the birds, ensure the maintenance of clean environment and proper waste disposal. This would reduce the chances of the roaming and scavenging animals ingesting foreign bodies.

4. Result and Discussion

The physical examination of the dead goose in this report showed the presence of lean pectoral muscles and the clinical signs of anorexia, respiratory distress, depression, cold, and dehydration are similar to the report of ^[7]. Oesophageal blockage can lead to swallowing difficulty and has been reported to occur in birds including the goose.

The upper oesophagus was clean and normal, while the lower oesophagus had prominent grooves that were keratinized likely due to long term inflammatory response to the presence of foreign body in the oesophageal wall. This is consistent with the findings of ^[8], that stricture can result from oesophageal obstruction. This depends on the location of the foreign body and on the degree and duration of the obstruction.

The histopathological examination of oesophageal tissue showed the presence of inflammatory phagocytic infiltration and necrosis of the epithelial cells and muscle. These findings are the results of normal immunological responses to the presence of foreign bodies, which in the present case are broken bottle piece and part of a super sack plastic sponge. The trachea showed oedema of the lamina propria, consistent with the findings of ^[9], who reported that during inflammation, the hydrostatic pressure in the blood vessels may rise, forcing water to leave the blood to tissues leading to the (oedema).

5. Conclusion

In this case the client was advised to maintain a clean environment within the compound, by ensuring proper waste disposal to reduce the chances of roaming and scavenging animals ingesting foreign bodies.

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