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## Surgical management of oropharyngeal diverticulum in a hen (*Gallus gallus domesticus*)

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### Abstract

A hen was presented with a soft swelling caudo-ventral to the lower beak. Physical examination revealed presence of a soft pouch with hard granular structures inside. Radiograph examination revealed radiolucent gas filled structure interspersed with radiopaque granular structures. The mass was excised under intranasal sedation (Midazolam @6mg/Kg bodyweight). Obligation to proper surgical techniques and maintenance of adequate postoperative measures rewarded with uneventful recovery.

**Keywords:** Oropharyngeal diverticulum, Hen, Intranasal sedation

### Introduction

Oropharyngeal diverticulum is a rare occurrence in poultry birds. The diverticulum is an abnormal sac or pouch formed at a weak point in the wall of the alimentary tract. The diverticulum thus can be terminated as “false crop” as there is no controllable aperture; it is simply an extension of the oropharynx (Fisher *et al.*, 1961)<sup>[2]</sup>. This diverticulum can store the feed material which reduces the actual feed reaching the stomach. This can lead to chronic emaciation and loss of body condition. Also, the swelling can cause discomfort to the bird. This case report deals with surgical management of oropharyngeal diverticulum.

### Materials and Methods

A hen was presented to the Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneswar with a soft insidious swelling at caudoventral region of lower beak (Fig. 1). Anamnesis revealed that the swelling was increasing since 2 months. On physical examination, hard granular structures were palpable and aspiration lead to deflating of the pouch after removal of air. It was suggested to go for radiological examination.



**Fig 1:** Showing soft insidious swelling at caudoventral region of lower beak

Radiograph revealed radiolucent gas filled structure interspersed with radiopaque granular structures (Fig. 2). After positive consent from owner, the bird was subjected to go for surgical excision under sedation.



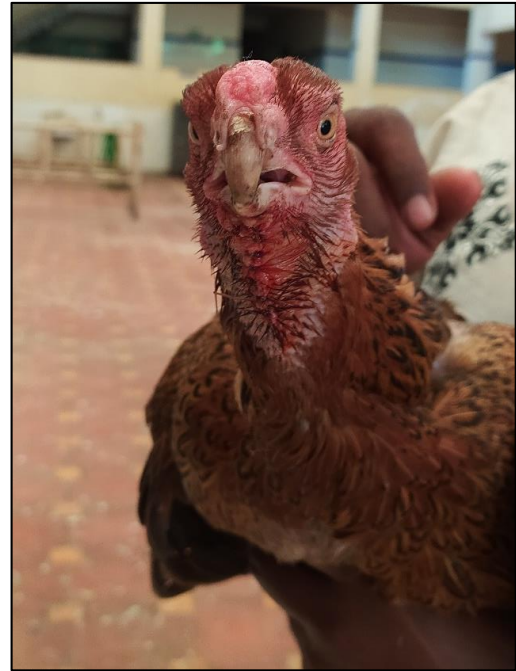
**Fig. 2:** Showing radiolucent gas filled structure interspersed with radiopaque granular structures

The bird was sedated with intranasal Midazolam @6mg/Kg BW. After sedation a circumferential incision was given just below the site of attachment. The subcutaneous tissues were dissected blindly. The pouch was then resected by taking utmost care by not injuring ventral oropharyngeal layer. After excision of mass, a remnant of a small perforating tract from ventral oropharyngeal region was visualized (Fig. 3). This confirmed to be an old tract developed due to feeding of grains with spikelet/ awn. These pointy structures of grain might have punctured the ventral oropharyngeal region which created the oropharyngeal diverticulum under scrutiny.



**Fig 3:** Showing remnant of a small perforating tract from ventral oropharyngeal region (white circle), after excision of the mass

The oropharyngeal tract was closed with chromic catgut no. 3-0 in continuous pattern. Then the subcutis was closed in a continuous pattern with chromic catgut no. 3-0. The skin was closed in a simple interrupted pattern with polyamide no 3-0 (Fig. 4).



**Fig. 4:** Showing successful surgical excision of mass

Opening of the oropharyngeal diverticulum revealed, black colored inner surface with grains which were old grain got access into the diverticulum during initial puncture. After few days, the punctured tract was obliterated leading to creation of gas filled oropharyngeal diverticulum.

Post operatively a course of antibiotic (Roxithromycin @10mg/Kg bodyweight) and anti-inflammatory drug (Meloxicam @0.2mg/Kg bodyweight) for a period of 5 days and 3 days, respectively. Liquid diet (ORS water or Glucose water) was advised for 3-4 days. The animal was able to eat properly by 3<sup>th</sup> day post-operative. Obligation to proper surgical techniques and maintenance of adequate postoperative measures rewarded with uneventful recovery.

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