

# Surgical repair of oesophageal rupture in a cock (*Gallus domesticus*)

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## Abstract

A three year old cock (*Gallus domesticus*) sustained a perforating wound at the neck following a cock fight. The cock had rupture of oesophagus and was brought in severe stress. Oesophageal anastomosis was performed under light plane of anaesthesia and recovered without any postoperative complications. Clinical signs and surgical management were discussed.

**Key words:** Oesophagus; rupture; anastomosis, perforating wound; cock; *Gallus domesticus*

## Introduction

Oesophagus is a flexible musculo - membranous tube that connects the mouth to the crop in birds. Unlike in animals, a large portion of the oesophagus lies at cervical region in birds. Stab wounds and incised wounds are usually seen over the body and neck of the cocks that are used as for gaming. The wounds over the cervical region may lead to tears in oesophagus and trachea or fistulation of crop or sometimes both. Oesophageal perforations may occur during the usage of rigid tubes for alimentation in excited birds or violently bobbing neonates (Bennett and Harrison, 1994). These fistulas and perforations can be detected easily by observing the spillage of feed or water through the wound, while the bird is taking the same through the mouth. But, in India, most of the traumatic wounds in poultry occur mostly due to cock fights. The suffering birds due to fighting immediately brought for veterinary aid. In the present paper, successful surgical management of oesophageal rupture in a cock (*Gallus domesticus*, Aseel) is reported.

## Material and methods

A three year cock (*Gallus domesticus*, Aseel) was presented to Department of Veterinary Surgery and Radiology, NTR College of Veterinary Science, Gannavaram with a complaint of wound at the neck region and the same was said to have happened during a cock fight three hours earlier. Physical examination revealed a perforating wound and rupture of complete thickness of the oesophagus (Fig-1) with a gap between the two ends of the severed food pipe. Lateral radiograph of neck did not reveal any air pockets surrounding the trachea (Fig-2) ruling out the involvement of trachea. Despite the severe lesions, the cock appeared active. It was decided to perform end to end oesophageal anastomosis immediately.



Fig-1: perforating wound on neck with ruptured oesophagus in a cock. Fig-2: Radiograph showing intact trachea without surrounding air pockets

The cock was induced light plane of anaesthesia by intramuscular injections of xylazine @ 16mg/Kg body weight and ketamine @ 60 mg/Kg body weight. The feathers around the wound were plucked and the lateral cervical area was prepared for aseptic surgery. The skin wound was extended to exteriorize the oesophageal edges. The two ends of the oesophagus were identified, secured and its lumen was guarded and maintained by passing a No 7 infant baby feeding tube from the beak to the crop (Fig-3). Repair of the severed oesophagus was carried out by performing end to end anastomosis with No 3-0 Polyglactin 910 in simple continuous suture pattern (Fig-4). The skin opening on both the sides of the neck was apposed by intradermal sutures using No 2-0 Polyglactin 910 (Fig-5).



Fig-3: oesophageal catheter and gap between the ruptured oesophageal edges.



Fig-4: anastomosed oesophagus with oesophageal catheter in situ



Fig-5: recovered cock after oesophageal reconstruction

Postoperatively the bird was given injection Enrofloxacin at the dose rate of 5mg/Kg body weight intramuscularly and Meloxicam at the dose rate of 0.2 mg/Kg body weight subcutaneously for 3 days. Orally multivitamin syrups (Zincovit) were administered to hasten the healing process. Oxytetracycline powder (Neoxy) was dissolved in water and was offered as a feed additive.

## Results

Regular dressing of the sutured area of skin was done up to 8<sup>th</sup> postoperative day by which time, complete healing of skin wound was noticed. Postoperative complications were not seen in an observation period of six months.

## Discussion

Trans-sectioned or severed oesophagus can be considered as a rare finding as no reports are available in birds, to the knowledge of the authors. On the other hand, reports are available on affections of crop including fistulation in a hen due to sharp iron object (Phaneendra and Saibaba, 2015), crop injuries in birds by animal bites, foreign body ingestion, feeding excessively hot food grains etc (Harrison, 1987), foreign body penetration causing crop injury in a pigeon (Basha et al., 2010) .

Trimming of the necrosed edges of the structure before its repair was advised by Bennett and Harrison (1994) in oesophageal perforations and Coles (2008) in fistulation of crop. However, this was not carried out in this case, as the cock was brought soon after trauma. The catheter used in the present case, maintained the luminal integrity of the oesophagus at the time of anastomosis. Coles (2008) suggested using a catheter during repair of fistulous crop to identify the mucosa. Early presentation and appropriate surgical reconstruction of oesophagus ensured a good recovery in the present case without any postoperative complications.

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