



ISSN: 2456-2912

VET 2024; SP-9(2): 42-43

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www.veterinarypaper.com

Received: 01-01-2024

Accepted: 06-02-2024

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A rare case of egg bound condition in Aseel bird and management

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Abstract

A two year old Aseel bird was presented to the Veterinary Clinical Complex, Obstetrics and Gynaecology section, Veterinary College and Research Institute, Salem with the history of straining since previous day morning, a swelling at the caudal abdomen and not able to oviposition. Based on the history, clinical signs and findings from physical as well as radiographic examination the condition was diagnosed as egg bound syndrome and warranted for conservative treatment. The egg was removed manually after proper lubrication with lignocaine gel and liquid paraffin. The bird recovered well after conservative treatment and no further complications were reported.

Keywords: Aseel, egg bound syndrome, digital manipulation, lignocaine gel, liquid paraffin, radiography

Introduction

Egg binding syndrome is the clinical condition characterized by lodgment of completely formed egg with shell in the cloaca or in the oviduct and difficulty in oviposition (Crespo and Shivprasad, 2003) ^[1]. Hen's oviduct consist of 5 parts and each parts have their own function, that includes infundibulum (involved in ovum or yolk pickup), magnum (act as albumin secreting region), isthmus (forming inner and outer cell membranes), uterus (act as shell gland and forming egg shell), vagina and cloaca involved in oviposition (a process of egg laying). This egg bound condition or difficulty in oviposition of egg could also be termed as dystocia of hen. It is most commonly recorded in pet birds like budgerigar, Parakeets (Worell, 1999) ^[2] and in broiler breeds of hen (Eitan and Soller, 2009) ^[3] and may culminate to fatal peritonitis and high mortality. There was no record available regarding egg bound condition in Aseel bird (native breed of Andhra Pradesh). In the present paper, diagnosis by physical and radiographic examination and management of an egg bound condition in an Aseel bird was reported.

History and clinical observations

A two year old Aseel bird was presented to the Veterinary Clinical Complex, Obstetrics and Gynaecology section, Veterinary College and Research Institute, Salem with the history of straining since previous day morning, a swelling at the caudal abdomen and not able to oviposition. On physical examination revealed egg was lodged in the terminal portion of the oviduct and bird was dull and depressed. Serous to mucous secretion from cloaca was noticed. For, further confirmation radiography of abdomen lateral view was done. Radiography of lateral abdomen revealed that presence of intact completely formed egg lodged in the vaginal portion of the oviduct (Figure 1) and it warranted the conservative therapy.

Treatment and discussions

The Aseel bird was stabilized with injection Dexamethasone (1.5 ml, CADILA pharmaceuticals) intramuscularly at breast muscle region. External portion of the cloaca was thoroughly cleaned with potassium permanganate solution to remove the secretion and debris around the cloaca. Internal and external portion of mucosa of the cloaca was applied with 2 percent lignocaine hydrochloride gel (LOX-2% Jelly, NEON pharmaceuticals) to desensitize that area.

Liquid paraffin 10 ml was infused into the cloaca between the egg and mucosa, followed by intact complete egg removed by slow and gentle digital manipulation (Figure 2).

After removal of egg from the vaginal portion, the bird showed comfort and active. Post operatively the bird was administered with Enrofloxacin (0.6 ml) and Meloxicam (0.5 ml) intramuscularly for three consecutive days. The owner was advised to provide calcium supplements in the form of shell grit or marketed products like CLAY-CAL (Clay-Cal Calcium Supplement for Birds, Hagen Hari Ltd.). The bird showed uneventful recovery without further complication.

In the present report, the egg bound condition recorded in two year old Aseel hen, which was agreement with the suggestions of Rooskopf (1996) [4] who stated that egg bound syndrome was commonly occur in irrespective of the age at any stage of laying period.

But, recently Thangamani *et al.* (2017) [5] reported that egg bound condition was common in young female birds at starting stage of laying period especially at one year of age.

Egg bound syndrome is an emergency clinical condition in egg layers which may culminate to life-threatening of the birds if left untreated early (Rooskopf, 1996) [4]. In the present case, at the time presentation bird experienced dull and depressed, severe straining, serous to mucus secretion from the cloaca and distended abdomen. For overcoming the stress the bird was administered with Dexamethasone intramuscularly as opined by Thangamani *et al.* (2017) [5].

The exact aetiology and patho-physiology culminate for this

present case was not known. Most commonly the egg bound syndrome may predisposed by any infection or inflammation (salpingitis) that affecting the oviduct, failure of innervation of nerves that supplies to the oviduct or paralysis of muscles of the oviduct (Harrison, 1986) [6], or large-sized or irregular size of the egg (Crespo and Shivprasad, 2003) [1]. Srinivasan *et al.* (2014) [7] recently documented prevalence and pathology of egg bound syndrome in commercial White Leghorn chicken and they recorded heat stress, asphyxia, hypocalcaemia, salpingitis, large sized egg, dehydration, vent trauma, obesity, tumour of the oviduct, abnormal ovulation are the various factors responsible for the egg bound condition. In the present case, the bird showing abnormal weakness of leg and posture that suggestive of hypocalcaemia might be predisposing factor for egg bound condition in Aseel hen and owner was advised to provide calcium supplements in the form of shell grit. Conservative treatment with gentle digital manipulation was done after application of lignocaine gel and liquid paraffin as opined by Thangamani *et al.* (2017) [5]. Prolapse of the oviduct, egg peritonitis, rupture of oviduct was the most common complication occurs, if the egg bound condition was left untreated early either with manual or surgical method (Saif, 2008) [8], but in the present Aseel hen such complications were not reported. Definitive diagnosis by both physical and radiographic findings followed by adopting conservative treatment early after stabilization of bird might be the reason for successful recovery of the Aseel hen in the present case study.



Fig 1: Radiographic image of intact completely formed hen egg present in the portion of oviduct



Fig 2: Unbroken egg removed from terminal portion of the oviduct by gentle digital manipulation

Concussion

The unusual case of egg bound condition was recorded in Aseel hen. The present case was successfully managed with adopting conservative method by gentle digital manipulation after thorough lubrication with liquid paraffin. The bird was recovered uneventfully after treatment without any further complications.

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