Case Report

SUCCESSFUL MANAGEMENT OF EGG - BOUND SYNDROME IN A NON-DESCRIPT HEN BY MILKING METHOD

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ABSTRACT

A 38-week-old non-descript laying hen weighing 2.1 kg was presented with the complaint of anorexia and failure to lay eggs for the past 4 days. Clinical examination revealed that the bird had frequent cloacal straining and further egg-like hard mass was palpable on digital examination. Radiographic examination confirmed egg-bound syndrome. The vent was cleaned and cloacal mucosa was desensitized. By gentle digital milking two intact eggs and a broken egg were retrieved. Post-operatively the hen was administrated with Inj. Oxytocin @ 1IU i/m along with antibiotic therapy for 7 consecutive days.

Keywords: Hen, Egg-bound, Digital milking.

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INTRODUCTION

Egg binding is a condition characterized by inability of a hen to deliver an egg with normal effort within a normal period, resulting in the lodgement of egg in the cloaca. This condition could also be termed as egg dystocia of hen (Crespo and Shivaprasad, 2003). Young hens with calcium deficiency, overweight, concurrent systemic illness, heat stress, malformed eggs and improperly positioned eggs are at higher risk for developing this condition (Stout, 2016). This case documents binding of three intact eggs in the cloaca and its successful management through digital milking.

CASE DESCRIPTION

A 38-week-old non-descript laying hen weighing 2.1 kg was presented to Small Animal Clinic, Out Patient, Obstetrics and Gynaecology (SAC- OP- OG) unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli, with the chief complaint of failure to lay eggs for 4 days along with distended abdomen and anorexia. Owner reported that bird was raised under free-range scavenging system and was occasionally

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fed only on grains, left-over feed and water. Further, owner also described that the laying cycle of the hen had started before 4 weeks. Clinical examination revealed that the bird was active and alert with frequent cloacal straining and had wide stance. Cloacal examination revealed inflamed vent, with reddish mucus discharge, and an egg like hard mass was palpable on digital examination. Plain radiograph of abdomen revealed presence of not less than two radio opaque intact eggs. Based on the above findings the condition was diagnosed as egg-bound syndrome. The vent was cleaned with normal saline and desensitization of cloacal mucosa was achieved by 2 % lignocaine spray. Bird was restrained in standing position with caudal inclination, slight pressure was applied on lower abdomen and egg was gently rotated through external manipulation to turn the broad end toward vent opening. After lubricating the cloacal passage with liq. paraffin, two intact eggs and a broken egg were retrieved by gentle digital manipulation. Gross examination of the egg revealed apparently normal yolk with rough shell. Post-operatively the hen was administrated with inj. oxytocin @ 1 IU i/m; inj. meloxicam @ 1 mg/kg along with syrup enrofloxacin 10% @ 15 mg/kg PO for 7 consecutive days. Owner was advised to feed calcium-rich balanced ration to laying birds. Bird had an uneventful recovery and started laying eggs on 10th postoperative day. Thus, this case documents that digital milking can relieve acute binding of unbroken eggs in the terminal part of the reproductive tract of hens.

RESULTS AND DISCUSSION

Srinivasan *et al.* (2012) reported higher incidence of egg-bound syndrome in laying birds in peak production period between 25-32 weeks, which might be due to high metabolic heat production during this period. It makes them unable to cope up with the increasing environmental temperature which is in concurrence with our case study.

Since the bird was raised under free-ranging scavenging, heat stress and nutritional deficiency might be the probable predisposing factors in this case study. Heat stress reduces the calcium uptake from the duodenal epithelium and further causes redistribution of calcium to uterus which in turn leads to weakened uterine musculature, disturbance to oviductal muscular peristalsis, poor stretching ability of cloacal muscles, defective oviposition and inactive shell glands (Srinivasan *et al.,* 2012). These findings could be the probable etiopathology of egg binding in present case study.

Further, in this case study, the intact egg was palpable during cloacal examination which differentiates this condition with egg peritonitis and internal egg laying where there is presence of cooked caseous egg yolk and inability to palpate the eggs in the abdominal coelum through cloacal examination (Srinivasan *et al.,* 2014).

The most common complications of egg-bound syndrome are vent prolapse, long-term egg retention, granuloma formation,

uterine impaction and subsequent rupture (Thangamani *et al.,* 2017). However, timely diagnosis and precise treatment protocol prevented the complication and contributed to the uneventful recovery of the bird in this case.

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Fig. 1: Inflamed cloaca with reddish mucus discharge

Fig. 2: Presence of not less than 2 radio-opaque eggs in the abdomen

Fig.3: Presence of intact eggs in the vagina

Fig. 4: Retrieved eggs