

**Case report****Gizzard impaction in Emu Bird: necropsy report****Prasanna Kumar V^{1*}, Manjunath S.P.², Chandre Gowda C.T.³, Aswartha G.⁴ and Pradeep Kumar V⁵**

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Article history Received: 11 Sep, 2014 Revised: 23 Nov, 2014 Accepted: 30 Nov, 2014	Abstract Emus are inquisitive in nature and usually start pecking at anything that interests them, which may cause ailments of digestive tract. This report put on record necropsy findings of an emu died due to gizzard impaction. Post-mortem examination revealed rigid, doughy, markedly swollen gizzard; entirely impacted with pieces of plastic cover, partially digested feed, small stones and sand which might have caused death. Keywords: Emu; gizzard impaction; ostrich; rhea
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Introduction

Emu (*Dromaius novaehollandiae*) belongs to ratite group along with Ostrich (*Struthio camelus*) and Rhea (*Rhea americana*). In India, emu farming has gained momentum due to high economic value for its meat, eggs, oil, skin and feathers. Emus are inquisitive in nature, inspect everything in their pen and usually start pecking at anything that interests them. Therefore, pen should be free from metal debris, plastic, glass or any other objects that could be dangerous, if ingested. Emu is considered to be monogastric herbivore; with an ability to utilize substantial amounts of dietary forage. In contrast to the digestive tract of chickens and turkeys, emu have no crop to store ingested food. However, they do have a relatively large true stomach (proventriculus) and gizzard, which has considerable food storage capacity. Impaction of the gizzard and proventriculus has been reported in ostrich, great rhea and lesser rhea as a result of improper diet, management, inadequate facilities, confinement and stress (Honnas et al., 1991; Sanfort and Rehmtulla,

1993; Reissig et al., 2001). Gizzard impaction in these ratites is characterized clinically by off-feed, dehydration, weight loss, ruffled feathers, prolonged general weakness, abnormal positioning of the head, lethargy, constipation and respiratory distress (Honnas et al., 1993; Sato et al., 1994; Reissig et al., 2001; Nagarajan et al., 2011). However, to the best of authors' knowledge, such condition has not been described in Emu. Therefore, a necropsy report to illustrate death of Emu bird due to impaction in gizzard is presented.

Case history and observations

A two year old dead female bird was presented to Veterinary Dispensary, Udayapura, Hassan, Karnataka, India. The bird was raised in metal wired fenced pen covered with plastic sheet to avoid cold breeze and dust. The bird was fed on a commercial feed with *ad libitum* water. The bird had history of progressive in-appetence, general weakness, constipation, weight loss, respiratory distress, and abnormal position of the head for 10-15 days before death.

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Fig. 1: a) Impacted gizzard with plastic cover pieces, feed, sand and few small stones; b) Empty intestine without any traces of digesta lining with mucous; c) Intestinal mucosa showing haemorrhages

Results and Discussion

Post-mortem examination was conducted on carcass, which revealed severe emaciation and dehydration. The gizzard was rigid, doughy, markedly swollen and occupied most of the abdominal cavity. Gizzard was entirely impacted with pieces of plastic sheet, partially digested feed, few small stones and sand (Fig. 1a). Plastic pieces were approximately 2-4 cm² in size. Intestines were empty without any traces of digesta and intestinal lining was covered with mucous

(Fig. 1b). Further, some part of intestinal mucosa showed haemorrhages (Fig. 1c).

Impaction of gizzard was caused by excessive ingestion of plastic material along with feed accumulated to form obstruction for the passage leading to death of the bird. Similar clinical signs and post-mortem findings were previously described in ostriches, greater rheas and lesser rheas (Sanfort and Rehmtulla, 1993; Reissig et al., 2001; Nagarajan et al., 2011). On inspection of the farm, it was observed that other birds remain healthy and did not show any clinical signs. However, the plastic sheet used to cover the metal fence, which was pecked by the bird, was not noticed by the owner and the death may be due to the improper management of the farm. Since emus are curious in nature, the bird pecked the plastic sheet causing gizzard impaction. Owner of emu farms may be advised to remove plastic sheets, stones, glass pieces, sharp edged particles and other foreign particles to prevent chances of gizzard impaction.

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