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Clinical Article

CONCURRENT CROP IMPACTION AND METALLIC SHARP FOREIGN BODY IN THE CLOACA OF *GALLUS DOMESTICUS*- A RARE CASE REPORT

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SUMMARY

A first study of concurrent crop impaction and metallic penetrating sharp foreign body was found in a domesticated layer hen from a backyard poultry setup in a rural area of Jammu region. The patient was presented with a history of inappetence, swollen neck and pain around cloacal region with difficulty in normal locomotion. Radiography revealed the presence of metallic foreign body lodged in cloaca of hen. Management included retrieval of metallic foreign body which was a 3.6 cm long metallic needle and per oral administration of mineral oil and antibiotics.

Keywords: Cloaca, Crop, Management, Metallic, Needle, Pain, Penetrating

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India has the total poultry population of 851.81 million comprised of 534.74 million of commercial poultry and 317.07 million of total backyard poultry (BYP) as per 20th Livestock Census, GOI. Currently, BYP contributes about 17.8% (18.41 billion) of the total egg production (103.32 billion) of India. The BYP has great potential to alleviate poverty, eradicate malnutrition, empower women and provide subsidiary income, and employment in rural and tribal areas (Rajkumar *et al.*, 2021).

Backyard poultry suffer from many infectious, nutritional deficiency and systemic diseases.In contrast to conventional commercial poultry, which are raised primarily in controlled indoor environments, backyard poultry are typically raised in less restricted settings, potentially exposing them to a greater variety of ingestible substances. Consequently, problems such as gastrointestinal impactions have been noted in backyard poultry. Foreign body syndrome in poultry has been reported by many authors but there is paucity of literature on the penetrating metallic foreign body in the cloaca of poultry. A non penetrating metallic foreign body (hex nut and long bur) and its management with lactulose and high fibre have been reported (Garrison, 2021). Similarly, Ninu *et al.* (2019) reported a rare case of foreign body (bone) in the esophagus of the hen and its successful surgical removal. A case of ingestion of metallic wire in a Myna and its surgical management has been reported (Champour and Ojrati, 2014). The present report describes about a case of concurrent crop impaction and sharp penetrating needle in the cloaca of an adult layer hen.

Case History and Clinical Examination

A one year old Aseel hen was presented to VCC, SKUAST-Jammu with the history of lethargy, depression, anorexia, swollen crop, stoppage of egg laying and pain in the cloacal region since a week. Physical examination revealed cloacal temperature of 107º F with pain on palpation of cloacal region and temperature recording.

Clinical examination of bird revealed impacted crop at the base of neck region. Crepitation and significant enlargement was evident on palpation of the region due to grains or feed material. Palpation of cloacal region gave the suspicion of 'broken egg' condition or foreign body and the case was further subjected to radiography for the confirmation of underlying aetiology of pain in cloacal region. Radiograph revealed the presence of a radiopaque sharp, pointed needle like object and an impacted crop (Fig. 1). Ferroscope was employed for the purpose of ascertaining the nature of object and presence of magnetic field detected by ferroscope substantiated the nature of the object.

Needle was removed gently from the cloaca of the bird aided by local anaesthesia and lubrication with lignocaine jelly (Fig. 2-5). Foreign body was measured about 3.6 cm long piece of 18 gauge needle (Fig. 6). Hen was treated with oral administration of 2-3 ml of liquid paraffin followed by gentle massage of crop to relieve impaction. Antibiotic course of enrofloxacin @ 10 mg/kg for 5 days orally alongwith multivitamin supplementation of vitamin A @ 4,000 IU/kg, vitamin D3 @ 2,000 IU/kg, vitamin E @ 10 mg/kg and vitamin B12 @ 5 mcg/kg orally for 10 days. Owner was contacted and confirmed the regain of appetite on second day of treatment and started laying eggs. Anorexia was associated with presence of penetrating metallic foreign body in the cloaca. It was supported by study on closing of cloaca of hen by sutured button and its effects showed marked decrease in feed

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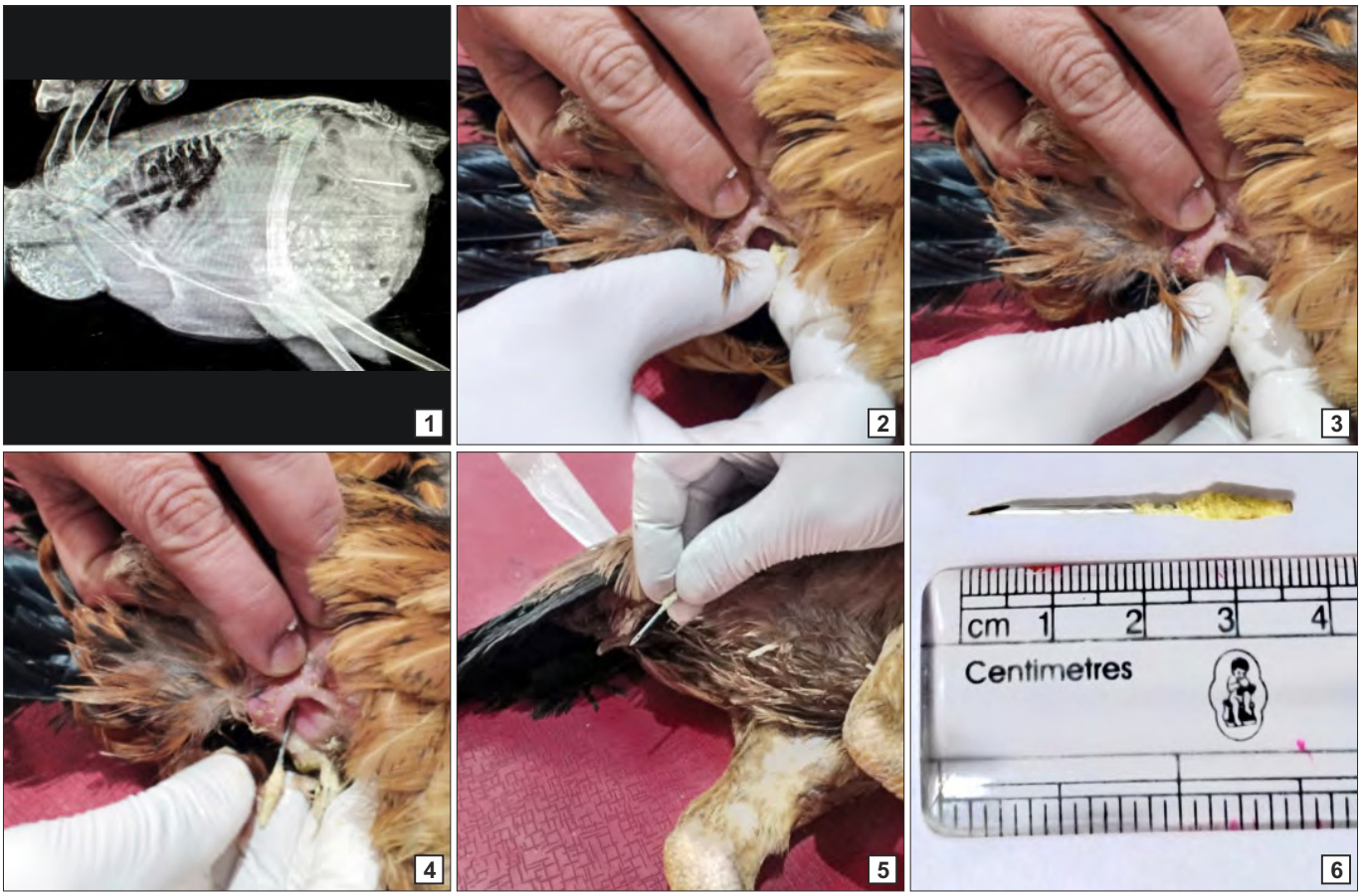

Figs. 1-6. Pictures showing metallic foreign body (MFB) in cloaca and crop impaction in radiographs (1), retrieval of MFB (2-5) measured as 3.6 cm long and sharp pointed metallic needle (6)

consumption as compared to control group (Sturkie and Joiner, 1959).

Gastrointestinal impactions are responsible for death of BYP and cause great economic loss to rural farmers. Haung et al. (2019) reported death of 42 backyard poultry cases in a retrospective study on gastrointestinal impactions. Foreign body syndrome in poultry reported by many authors associated with minerals deficiency resulting pica in birds. Garrison (2021) reported a case of non penetrating foreign body (hex nut and long bur) and its management with lactulose and high fibre in poultry bird. No literature could be found on metallic foreign body in a BYP. A rare case of foreign body (bone) in the esophagus of the hen (Ninu et al., 2019) and a case of ingestion of metallic foreign body (wire) in a Myna and its surigical management have been reported (Champour and Ojrati , 2014). A first study of concurrent crop impaction and metallic penetrating sharp foreign body and its successful management is reported.

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