Foreign Body Proventriculitis in a Peafowl (*Pavo cristatus*)

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Case Report

An unusual case of foreign body proventriculitis was detected in a peafowl, which was referred for post mortem examination to the Department of Wildlife Health and Management, Veterinary College, Jabalpur, from the Forest department. History revealed that the bird was lethargic and anorexic for the last 5 days and died without showing any characteristic symptoms.

Observation and Discussion

The peafowl showed dullness and anorexia for about a week before death. At necropsy, mucoid exudate was present in the nostrils and beak. Lungs were congested and liver was swollen and fragile. There was marked enteritis and intestinal tract was devoid of feed contents. Proventriculus wall was thick and appeared hard. Hemorrhages were present over the mucosa of the proventriculus and gizzard. A coin of *2 rupee* was found lodged in the isthmus, a narrow area between proventriculus and gizzard. The other end of the coin was adhering to the mucosa of proventriculus showing hemorrhages. Location of the coin was such that it partially obstructed the digestive passage beyond the isthmus. The engravings on both the surfaces of the coin wore off.

Affected organs were collected and tissue fixed in 10% formalin, processed for histopathology and stained with routine haematoxylin and eosin method (Culling, 1975). On microscopic examination, thickening of proventricular wall and necrosis of the epithelial lining was noticed. Hypercellularity was characterized by increased number of lymphocytes in the lamina propria and hypertrophy of adenoepithelial cells of proventricular glands was also observed.

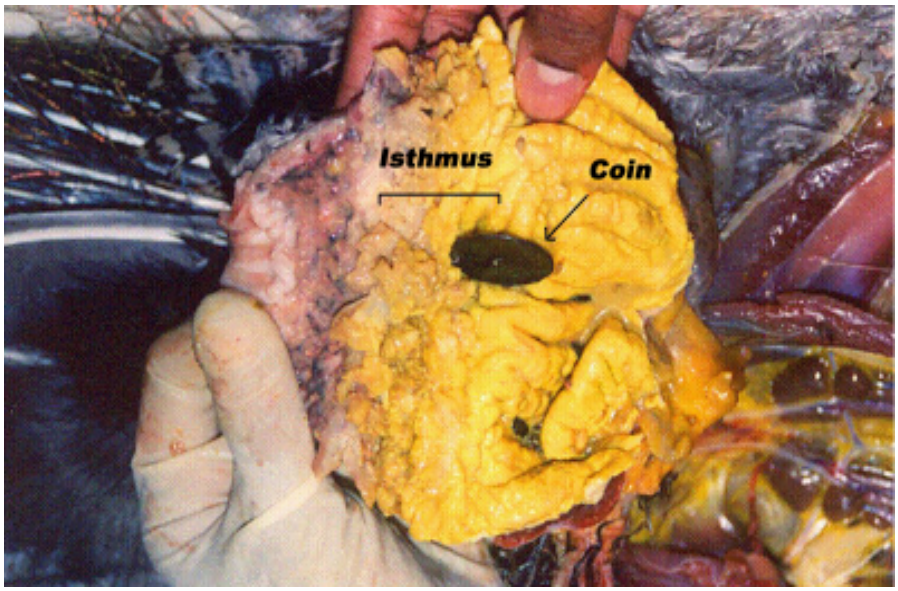

Image 1. A Indian Rs. 2 coin lodged in the Isthmus

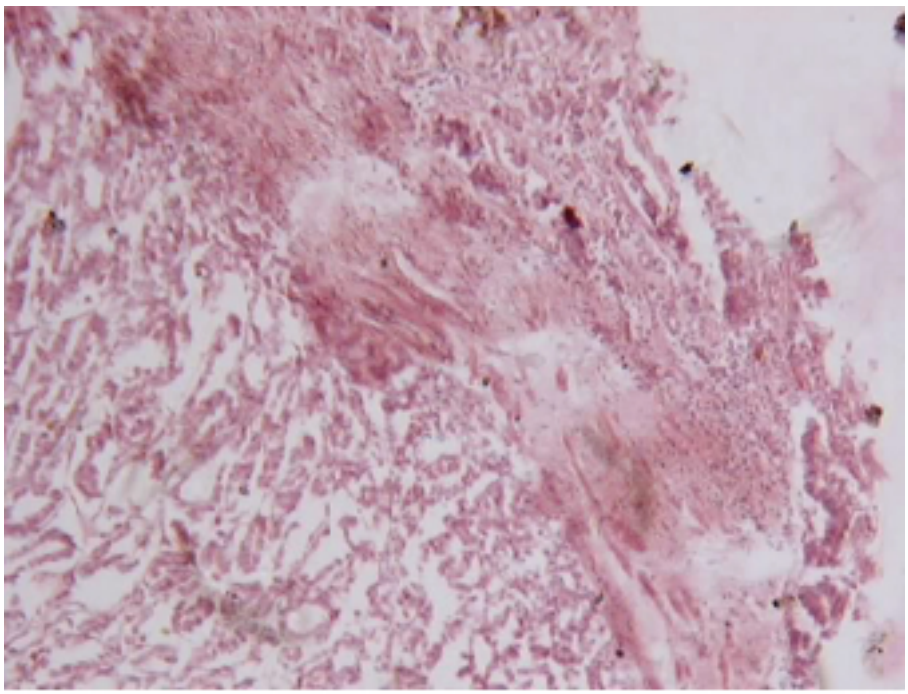

Image 2. Thicking of Proventriculus walls (10X)

A unique 'egestion reflex' for the oral expulsion of non-digestible materials has been reported in birds (Denbow, 2000). It is assumed that in the present case, the coin could not be expelled as it got lodged between isthmus and

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proventricular walls. Isthmus is the pacemaker for gastrointestinal cycle as the myentric plexus is located in the isthmus wall and injury to this plexus reduces contractions of the muscular stomach (Denbow, 2000). It seems that the lodged coin exerted pressure over the isthmus wall, which could have led to myentric plexus dysfunction leading to reduced GIT motility and the intestinal lumen devoid of feed contents. There is increase in the contractions of the gizzard and anti-peristalsis before the egestion reflex (Denbow, 2000). Therefore the acidic contents of gizzard (pH 2-3) revert back into the proventriculus (pH 2.6-4.2).

The reaction of the coin with this strong acidic environment in the stomach is assumed to be the cause of wearing off of the engravings on both its surfaces.

Different types of foreign bodies such as nails, wooden splinters, sticks and wires have been reported in the digestive tract of chicken and peacock. Biester and Shwarte (1965) reported death of birds following anorexia and emaciation, in the case of ventriculitis. Rao and Acharjyo (1990) reported deaths due to obstructive vegetable sticks and thorns in green pigeon and white peacock. Shrivastav *et al*. (1992) also have reported traumatic ventriculitis in a peacock.

Foreign bodies in digestive tract of birds may be a cause of impaction, enteritis, hepatitis (Rao and Acharjyo, 1990; Pockmhn, 1973 and Shrivastav et al., 1992) and foreign body proventriculitis, as has been reported in present communication.

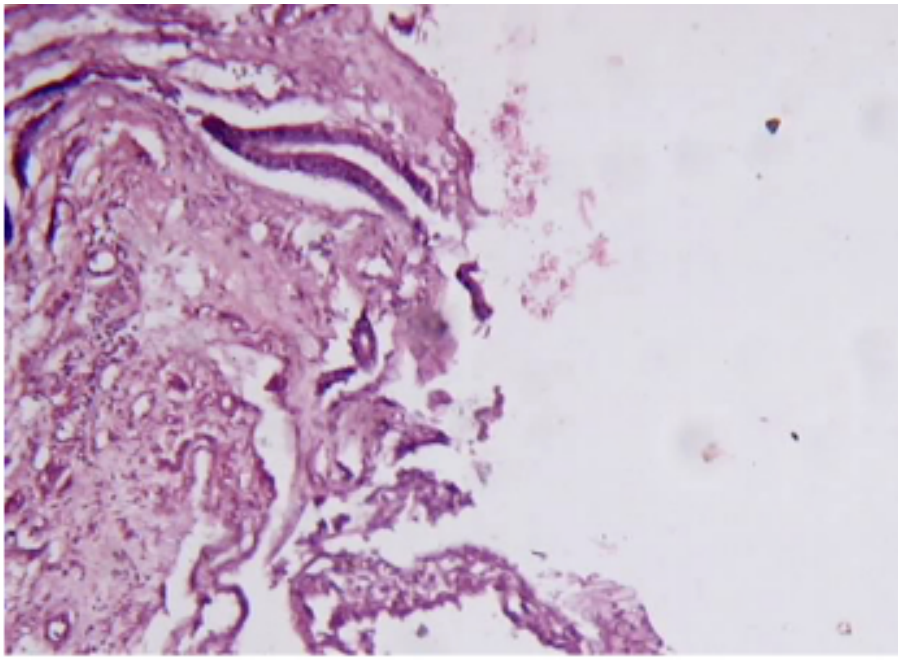

Image 3. Necrosis of the Epithelial Lining (10X)

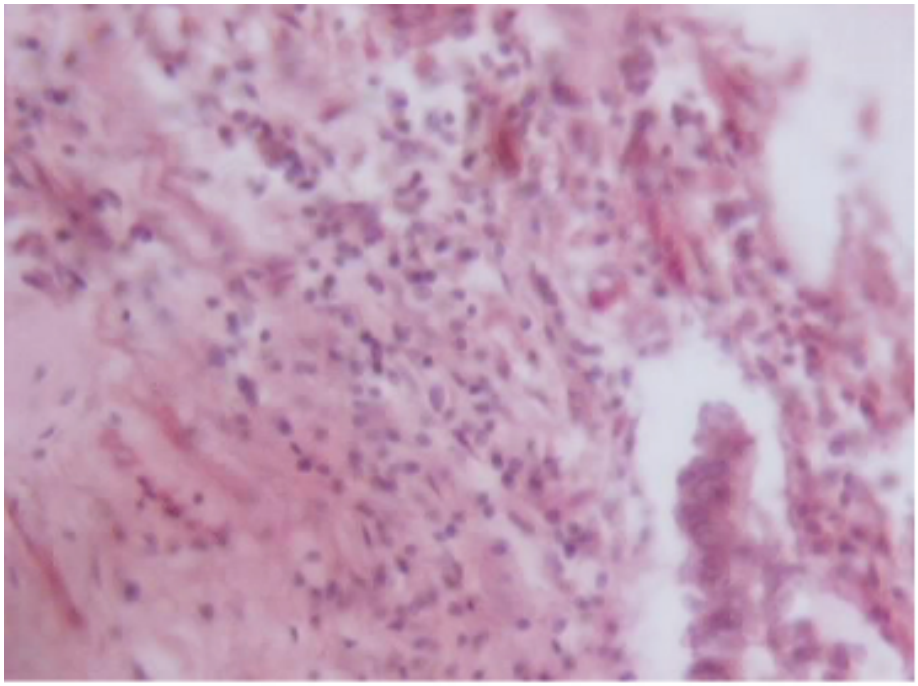

Image 4. Hypercellularity with increased lymphocytes (40X)

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