Proventricular-Ventricular Impaction in Ostrich (Struthio Camelus)

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Abstract: In this study from 58 of 4 month male and female ostrich with 3 pieces of dead ostrich during 24 hours and 8 ostrich with dangerous general conditions history of manufactured flock have gotten after prime survey about farm condition, lack of enough space, unsuitable availability to drinkers and feeders and most important, lack of suitable litter for breeding and increase of stress to birds were recorded. Clinical examination of the birds revealed anorexia, emaciation, decreased defection, lislessness, separation from the flock and recumbence. Necropsy revealed edema, erosions and hemorrhagic ulcers in the stomach of the dead birds. Foreign bodies such as sand, stone; pieces of wood, glass and plastic diagnosed. Postmortem examination revealed accumulation of 1 liter of serum fluid in abdominal cavity and 50ml of serosanguineous fluid in thoracic cavity. Medical treatment was initialed in 8 birds with laxative (70ml, q12h) and Psyllium (60ml, q12h); all of them recovered. Under stress factors, ostriches tend to eat foreign material; therefore, adequate housing, nutrition and care are crucial in prevention of stomach impaction.

Key words: Ostrich · Ventricular · Proventricular · Impaction · Tabriz

INTRODUCTION

Ostriches are famous for curiosity and specially interest to bright and colored materials. If external materials swallowed depending on the size, hardness and neatness of edges can cause intensive troubles. Usually ostriches in every age are in exposure to these dangers but as the bird gets older, high ability of its gizzard reduces these troubles are reduced. Most important affection age of an ostrich is reported about 4-6 month [1, 2]. But occurrence of these troubles are reported in older ages too [1-3].

External materials which are swallowed can be from various types. Chipped glass, wood fragments, feather, rope, plastic thread and big gravels are some materials that if exist in farm of an ostrich can be swallowed by the ostrich. Perfectly it seems that existence of plastic materials are more dangerous than wood fragments or even gravels, because the enzymes of digestive system have perfect effects on plastic materials and the pressure of gizzard muscles are not able to grind or digest the plastic materials. Usually involved ostriches that indicate clinical signs would die if they don’t treat [4].

Case Report: In one of the ostrich farms in Tabriz with 58 pieces of 4 month ostrich which entered in 10 April 2010, 3 mortality reported in 8 May 2010. It is distinct from the prime surveys that 8 birds didn't have suitable general conditions. At the first phase history of ostrich's general conditions during the days they entered in the farm was taken, that shows suitable condition of flock in the entrance time. Only a little feebleness, in appetent and lack of enough balance while walking has been seen that seems a common matter because of carrying stress. It was distinct from surveys done in breeding area that ostriches weren't suitable from the sight of congestion, training space and availability to drinkers and feeders. Most important of all is that lack of suitable litter for ostrich by extinct of big stones, feather, plastic thread; branches of trees were obvious in pens. Clinical observations in 3 dead ostriches contains lack of necessary appetite for eating and drinking although other ostriches show hunger and thirst and they go toward winterers but they don't use food or water or they use these resources very little. Involved ostriches were depressed and dehydrated and they were recluse because of feebleness.
Involved ostriches didn’t excrete feces because of inappetence and they got paralysis. In dead ostriches and some of 8 involved ostriches hardness and accumulation in abdomen region (proventriculus and ventriculus) can be felt well. Involved ostriches had light weight in comparison with healthy same age ostriches.

In necropsy of dead ostriches have found plugs with various dimension [5-8 cm] in intestine and stomach. In abdomen was about 1 liter cerosic liquid was gathered. Edema and bleeding were observable in the form of erosion and ulcer in mucus specially stomach [3].

Intestines in every 3 dead ostriches were empty of feed. Colonies were turgid and full of gas. A little change in the form of fully blood was seen in liver. In surveys done about plugs was distinct that they contain plastic rope, branches of trees, big gravels and feather. By observations done on flock and involved ostriches to become well was used from laxative dose of 70 ml one time in every 12 hour for 3 days and Pesilium dose of 60 ml one time in every 12 hours for other two days [5]. Along with treatment, ostrich’s areas were cleaned out from big gravels and branches of trees and rope [6]. 10 days after the treatment involved ostriches began to become well.

DISCUSSION

Accumulation of different parts of digestive system of ostrich especially proventriculus and ventriculus in young ostriches happens routinely before 3 month of age [1]. Accumulation mostly happens after eating different materials such as big gravels, plastic rope and indigestible materials. Involved ostriches were feebleness and in spite of thirsty they are not willing to drink water [2]. And dehydration and feebleness of involved ostriches are notable signs of this phenomenon [6]. According to autopsy study of Mushi et al. [2], Teodore et al. [6]
Youksek et al [3] involved ostriches illustrated accumulation of pre stomach and stomach by different materials such as gravels, plastic ropes. Edema and pin like bleeding are seen in stomach mucus and intestines were empty of digesta [6, 7]. As observed in present studies, different methods were used for treatment of involved ostriches.

Using eatable forms of mineral oils by 3-6ml/kg/BW dose or using of Psyllium 60 ml in every 12 hour can be useful [6]. In this report using laksative with 70ml, q12h dose for 3 days and continuing the treatment with Psyllium with 60ml, q12h dose for 2 other days demonstrated good results. In some cases that necessary recovery not been obtained by using not mentioned materials until 12 hours, we should use abdomen surgery correction of impaction of the proventriculus by anesthetic drugs like Azaperone, halothane, isofluorane, diazepam, ketamine or Xylazine and for pricovery we can use Diazepam with 0.1mg/kg/BW dose in the form of venous [6].

Under stress factors, ostriches tend to eat foreign material; therefore, adequate housing, nutrition and care are crucial in prevention of stomach impaction [3].

REFERENCES


