

Egg binding in Budgerigar (*Melopsittacus undulatus*)—an emergency condition

Abstract

Egg binding condition is in which delayed passing of the egg through the reproductive tract. It is a life threatening condition if not treated at right time and reported frequently in smaller size birds than bigger size birds such as canaries, finches, parakeets, budgies, lovebirds, and cockatiels. Most commonly it is reported in female birds not exposed to a mate. It is due to deficiency of the vitamins and minerals mainly calcium and other management practices. Prognosis of the egg binding condition mainly depends on the early diagnosis and selection of appropriate therapeutic procedure. Present communication reports on the importance of immediate attention in egg binding condition in Budgerigar.

Keywords: budgerigar, egg binding, management, mortality

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Discussion

Egg binding is an emergency condition in which delayed passing of the egg through the reproductive tract and it is a life threatening condition if not treated at appropriate time. It is reported in reproductively active birds and most common in female birds which are not exposed to a mate.¹ It is a multi-factorial in origin and factors for development of the condition are deficiency of the vitamins and minerals mainly calcium.² Individual bird variation is recorded due to the age (very young and very old), body score condition (malnutrition and over weight), excessive egg production, restricted movements of the birds (lack of exercise), adverse environmental changes (extreme cold and hot), provision of insufficient water or feed, passing of malformed eggs and improperly positioned eggs, concurrent systemic illness and hypothermia.³ Few literatures reported that female birds which are strongly confirmed to the owners and birds which are more attachment to the mirrors or toys are more prone for development of the egg binding condition.^{4,5}

Exhibition of the clinical signs varies with the individual birds. Recorded signs are wagging of the tail, frequent straining, distension of the abdomen, imbalance on perch, lameness, difficulty in passing of droppings, reduction in the width and consistency of droppings, development of the nesting and clucky behaviour, respiratory abnormalities, open mouth breathing and exaggerated movement of the sternum and ribs, reduction in appetite, continuously sit on the floor of the room, cloacal prolapse, flaccid vent and coelomic distension (Figure 1). Chronic egg binding condition leads to development of the pressure induced neurological signs (obturator paresis), kidney damage and prolapse of the reproductive organs, coelom causes space occupying mass effect which affects the bird's cardio-respiratory function, hypoxia and decreased venous return finally leads to death (Figure 2).^{2,6}

Diagnosis of the egg binding condition is mainly based on the owner's history and clinical signs. A through physical examination of the individual birds including examination of vent, feathers, feet and abdomen and status on pain evincing while abdominal and coelomic palpation for the detection of eggs. Biochemical analysis of the birds for the complete blood count, serum biochemical

profiles including ionized calcium, total calcium, phosphorous, creatinine kinase, creatinine and uric acid levels. Confirmation of the condition determined by the radiographic examination of the abdomen for the presence of eggs with shell and ultrasonography examination if the different visceral organs including reproductive tract. Electrocardiography also utilized for assessment of electrolyte variations.^{5,7,8} Post-mortem examination of the birds revealed presence of the egg in the reproductive tract (Figure 3) and consistency of the egg shell depends on the levels of calcium and liquefaction of the yolk depends on the duration of the condition (Figure 4).



Figure 1 Budgerigar with distended abdomen and presence of pasty droppings.



Figure 2 Budgerigar PM - Presence of the congested abdomen.



Figure 3 Budgerigar PM - Presence of the egg within the reproductive tract.

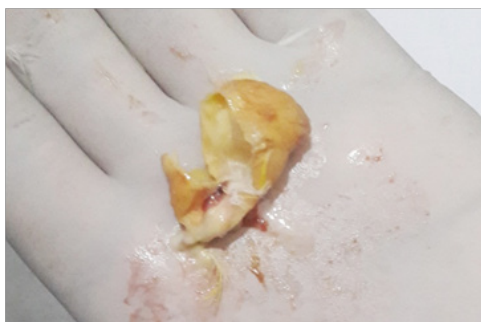


Figure 4 Budgerigar PM - Smooth shelled egg with liquefied yolk.

Success of the treatment varies with affected individual bird and it depends on the duration of illness and time of presentation to the veterinarian. Egg binding condition can be managed by manually expelling the egg or by surgical removal of the egg. Manual expulsion of the egg can be succeeding by concurrent administration of calcium gluconate (5-10 mg/kg body weight, IM) for every 4 hours, oral supplementation of highly digestible sugar supplements, oxytocin (3-5 IU/kg body weight IM) and topical intra-cloacal administration of prostaglandin E2 (0.02-0.1mg/Kg body weight) gel.^{1,9}

Surgically by the process of oocentesis and it is done by inserting the syringe into the egg present into the abdominal cavity for removal of the contents to reduce the size of it. After reduction in the size of egg by application of lubricants such as oil, it is easy to manage. In addition to the any one of the above, provision of fluid therapy, supplementation of vitamin, minerals, broad spectrum antibiotics and steroids to control the concurrent bacterial infection and the pressure induced pain respectively.^{1,10}

In recent days, maintenance of the love birds as pets increasing day by day. Egg binding condition can be controlled by selection of genetically resistant birds, maintenance of proper breeding timings, age of breeding and providing the suitable environmental conditions. In caged birds, it is advised provision of time for flying to prevent high body condition score. It is advisable to go for spaying for the very small size birds.

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Conflict of interest

Author declares that there is no conflict of interest.

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