



Surgical removal of oviduct due to egg retention in a budgerigar (*Melopsittacus undulatus*): A case report

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Abstract

A one year old budgerigar (*Melopsittacus undulatus*) with difficulty in egg lay and dystocia sings was referred to the Veterinary teaching hospital of the school of Veterinary Medicine of the Razi University. Other signs were depression, loss of appetite and feeding. Radiography of the bird in lateral view showed retention of some eggs in the oviduct. Attempt to relief the dystocia through the cloaca was unsuccessful. Local surface anesthesia with abdominal incision was chosen for treatment. Six eggs were removed out of oviduct. Oviduct and abdominal cavity was also washed with sterile normal saline and abdominal wall sutured routinely. Antibiotic therapy and vitamin supplement was administrated postoperatively. One month postoperative follow up showed a healthy bird without any signs of discomfort.

Key words: budgerigar, egg retention, laparotomy incision

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Introduction

Avian reproductive disorders are the result of complex combination of hormonal, physiologic and behavioural actions reacting to photoperiods, food availability and nesting (Bowles, 2002). Egg retention is a disease of cage birds that is comparable with dystocia in a viviparous animal. In fact, dystocia occurs when there is difficulty in laying. Diagnosis is based on the clinical signs, history, physical examination and radiography (x-rays) and/or ultrasound. Depending upon the severity of condition this syndrome, there are numerous clinical signs including abdominal straining, bobbing or wagging of the tail, depression, loss of appetite and abdominal distension (Crosta et al., 2003). The treatment depends on the condition of the bird, severity of the signs, the location of egg, and the time the bird has retained egg. For a bird that shows this disorder, treatment may vary from elevation of the environmental temperature, injection of calcium and possibly administration of vitamin A, D, E, selenium

(Jenkins, 2000; Crosta et al., 2003; Quesenberry and Hillyer, 1994; Johnson, 2000).

In this case because of previously the bird was treated with calcium tablets and buddy seeds. Based on radiological finding, laparotomy incision for treatment of egg retention of the bird was chosen.

Case History

A one year old budgerigar (*Melopsittacus undulatus*) showing sign of dystocia was referred to the School of Veterinary Medicine of the Razi University. The bird showed failed attempts of laying egg during three last weeks. Other signs were depression, distension of abdomen and loss of appetite. The owner provided calcium tablet and buddy seeds. On physical examination, the bird was alert and responsive. It was slightly dehydrated. Feather condition was excellent. A large firm to hard, oval mass was palpated in its caudal abdomen. Radiography of the bird in lateral view showed retention of some eggs in the oviduct. Attempt to relieve the dystocia through the lubrication of the vent was unsuccessful.

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Materials and Methods

Local surface anesthesia was induced by pouring 1% lignocaine (Lidocaine 2% + Noradrenaline 2%, NASR Ph. Co., Iran) on the abdominal skin. The abdomen surface was prepared for laparotomy incision. In the abdominal cavity, the oviduct was located and incised. Six eggs were removed out of it (Fig. 1). Then oviduct was washed with sterile normal saline and sutured by Vicryl No. 5-0 in a simple continuous suture pattern. Abdominal cavity was also washed similarly and abdominal wall was sutured by silk (No. 3/0 (Silk HEILING, Design in Germany) in simple interrupted suture pattern. Postoperatively, the bird was kept in individual cage and tetracycline was administered orally for four days. Good quality food and multivitamin-mineral powder was also provided. One month after operation the bird was healthy without any signs of discomfort.



Fig 1: The removed out eggs, postoperatively

Discussion

Egg retention (dystocia) is the most common in smaller species such as budgies, love birds, finches, canaries and cockatiels. Common causes include genetics, malnutrition (calcium, vitamin A and E, protein, and selenium deficiencies), excessive egg production, malformed eggs, first time laying, genetic predisposition, obesity, systemic disease and oviduct disorder (Speer, 1997; Bowles, 2002; Pollock & Orosz, 2002; Crosta et al., 2003). The retained egg may place pressure on the sciatic nerve, colon and kidneys and may affect their function and health (Speer, 1997; Bowles, 2002; Crosta et al., 2003). If the egg ruptures while still inside the bird, life-threatening peritonitis may occur (Echols, 2002). Treatment is dependent on clinical signs. Birds must be stabilized before attempting egg removal. Heat, fluids, calcium supplements, and analgesics will help stabilize the bird. Any prolapsed tissues should be lubricated and reduced if possible. Sometimes just supportive care alone will be enough to allow oviposition. If oviposition does not

occur, then prostaglandin and hormonal therapy is indicated. Prostaglandin E used topically will dramatically relax the uterovaginal sphincter and stimulate oviductal contractions. Oxytocin will stimulate uterine contraction if calcium levels are near normal. One advantage of oxytocin is that it is readily available however; it does not relax the uterovaginal sphincter (Rosskopf and Woerpel, 1984; Hudelson and Hudelson, 1996; Johnson, 2000; Crosta et al., 2003). Some drug such as PGF 2α , arginine vasotocin, and oxytocin are not recommended because they induce strong uterine contractions which can lead to reverse peristalsis, severe pain, and/or uterine rupture (Hudelson and Hudelson, 1996; Crosta et al., 2003). Manual manipulation is accomplished by milking the egg into the pelvic canal. Care must be taken not to apply pressure dorsally or to induce excessive pain. If the egg is not delivered via massage then surgery is indicated. Non surgical preventive measures include husbandry changes, behavioural modification and medical management (Krautwald-Junghanns et al., 1998; Bowles, 2002; Crosta et al., 2003). Geoffrey and others (2001) mentioned endoscopic salpingohysterectomy for permanent control of this problem in juvenile cockatiels (*Nymphicus hollandicus*). Other method for similar problem used is tamoxifen as a chemical method for blocking the bird's reproductive cycle and egg laying in budgerigars (Lupu, 2000).

It was believed that dystocia in this bird was the result of providing buddy seeds in order to make breeding birds out of season and supplying excess calcium more than its requirement by owner.

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