

Olgu Sunumu

HYSTERECTOMY OPERATION FOR THE TREATMENT OF THE EGG BINDING IN THE LOVEBIRD (*AGAPORNIS COMPRİSE*): CASE REPORT

Mehmet Can GÜNDÜZ^{1**}, Seval TOYDEMİR², Sinem Özlem Apaydın ENGİNLER²,
Özge Turna YILMAZ², Funda YİĞİT³, Melih UCMAK²

Geliş Tarihi : 17.10.2008
Kabul Tarihi : 26.12.2008

Aşk Kuşunun (*Agapornis comprise*) Yumurta Tıkanıklığı Tedavisinde Histerektomi Operasyonu

Özet: Olgunun materyalini yumurta tıkanıklığı nedeni ile üç ay önce histeretomi operasyonu geçirmiş 15 aylık aşk kuşu oluşturdu. Kloakal açıklığın kayganlaştırılmasının ardından kuşa kalsiyum glukonat (0.5 mg/100 g) ve oksitosin (1 unit/kg) kas içi uygulandı. Bu uygulamalardan sonuç alınmadığı için yumurta elle çıkarılmaya çalışıldı. Bunun sonucunda yumurta kabuğunda kırılma meydana geldi. Olgunun durumu ve gelecek yaşamı göz önüne alınarak histerektomi operasyonu yapılmasına karar verildi. Operasyon genel anestezi altında başarıyla sonuçlandırıldı. Bu gibi olguların sağaltımında; genel anestezi ve cerrahi girişim riskli olduğu halde ameliyatın başarıyla uygulanabileceği gösterildi.

Anahtar Kelimeler: Histerektomi, Yumurta Tıkanıklığı, Aşk Kuşu

Abstract: The case material is a 15 months-old lovebird who performed hysteretomy operation for egg binding three months ago. Calcium gluconate (0.5 mg/100 g) and oxytocin (1 unit/kg) were administered intramuscularly after the lubrication of the cloacal opening. These applications yielded no results and attempts were made to remove the egg manually as a result of which the egg shell was broken. By considering the case's current condition and future life, treatment by hysterectomy was preferred. The surgical operation was successfully performed under general anesthesia. It was showed that although general anesthesia and surgical operations are risky in such cases, they can be successfully performed.

Key Words: Hysterectomy; Egg binding; Lovebird

** Mehmet Can GÜNDÜZ, İstanbul Üniversitesi Veteriner Fakültesi Doğum ve Jinekoloji ABD, Avcılar Kampüsü 34320 İstanbul/TURKEY Tel: +90 533 6347686 e-mail: mcg@istanbul.edu.tr

¹ The Institute of Medical Sciences, University of Istanbul, Cerrahpasa 34303, İstanbul, Turkey

² Department of Obstetrics and Gynecology, Faculty of Veterinary Medicine, University of Istanbul Avcılar 34320, İstanbul, Turkey

³ Department of Histology and Embryology, Faculty of Veterinary Medicine, University of Istanbul Avcılar 34320, İstanbul, Turkey

Introduction

Dystocia, also called egg binding, occurs frequently in budgerigars, cockatiels, lovebirds, finches and canaries (2, 5). Common causes for egg binding include obesity, malnutrition or deficiencies in calcium, vitamin A, protein, vitamin E, and selenium, excessive egg production, malformed eggs, first-time egg laying, lack of exercise, stress, old age, coelomic masses, hernia, and oviduct pathology or infection (6).

Clinical signs of egg binding include depression, inappetence or anorexia, diarrhea or lack of droppings, wide stance, straining and wagging of the tail, leg paralysis, dyspnea and drooped wings in canaries (8, 10, 11). Diagnosis is based on history, clinical signs, physical examination findings, and radiographic examination findings. Radiographs may reveal an egg and increased density of the medullar cavity of certain bones called polyostotic hyperostosis or "egg laying bone". Eggs high in the oviduct and soft shelled eggs may not be palpable, but the coelom will be swollen and soft. Soft-shelled eggs may appear radiographically as coelomitis or a coelomic mass (4).

Following the physical examination patient stabilization is critical. The patient should be placed warm humid and steam-filled oxygenated incubator. Calcium should be given intramuscularly in all situations. Prostaglandin E2 and oxytocin have all been used to help bound egg pass (10). If oviposition does not occur post medical treatment non-surgical techniques such as digital pressure should be attempted manual removal of the egg through applying gentle pressure with the fingers (9).

Case presentation

The case material is a 15 months-old lovebird who performed hysterectomy operation for egg binding. She was referred again to our clinic three months after with the same complaint. Upon physical examination egg binding was detected. Radiographic examination revealed a 2.2 x 1.8 cm egg in the uterus (Figure 1). Calcium gluconate (0.5 mg/100 g, Calsidine; Biofarma, Turkey) and oxytocin (1 unit/kg, Oksitosin; Vetaş, Turkey) were administered intramuscularly after the lubrication of the cloacal opening. These applications yielded no results and attempts were made to remove the egg manually as a result of which the egg shell was broken.

As medical and non-surgical applications yielded no results, it was decided to have the egg removed by hysterectomy. Consequently, the patient underwent general anesthesia by using 15 mg/kg ketamine (Ketalar, Pfizer Warner Lambert; Turkey) and kept anesthetized by means of halothane (Halothan, Aventis Pharma; Turkey) administered through a face mask. The feathers were plucked from the surgical site.

This procedure was performed through midventral incision. Prior to surgery a cotton swab was used into the cloaca for reference. Once the cranial oviduct and uterus were examined, bluntly dissect the ventral ligament to straighten out all the folds in the uterus. The cranial oviductal artery and vein are at the base of the infundibulum were ligated with hemostatic clips. The uterus (Figure 2 and 3) was elevated while ligating or cauterizing any vessels originating off the external iliac artery, middle oviductal veins, ischiatic artery and hypogastric vein. Hemostatic clips and suture were applied near the cloaca at the level of the uterus and vaginal sphincter. Once the uterus was transected and then the dorsal ligament could be dissected using bipolar forceps. For skin closure, 4-0 silk (Ezgi Pet, Turkey) was used.



Figure 1: Radiographic view of the egg.

Resim 1: Yumurtanın radyografik görüntüsü.

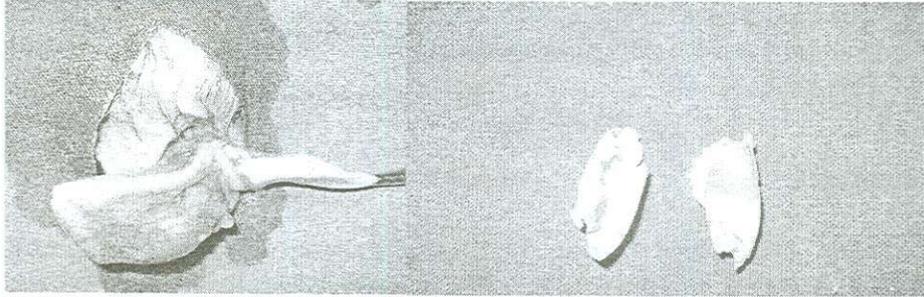


Figure 2: The view of the uterus.

Figure 3: The view of the retained egg.

Resim 2 : Uterusun görüntüsü.

Resim 3: Tıkanıklığa sebep olan yumurtanın görüntüsü

Discussion and Conclusion

Budgies and lovebirds are also chronic egg layers (6). Egg-binding is most commonly seen among cockatiels, budgerigars and lovebirds. Calcium, Prostaglandin E₂ and oxytocin can be used to help bound egg pass (1, 10). Gonadal trophic hormones (pregnant mare's serum) that were used with success to induce egg laying in canaries led to a high incidence of soft-shelled eggs, eggs laid out of the nest and egg binding (12). If the egg is accessible in the vagina, the contents can be removed with hypodermic syringe and needle (9). In our case, neither calcium and oxytocin administration nor manual manipulation yielded any desired results.

Surgery is indicated for treatment of medically and non-surgically non-responsive egg binding (3). When the egg can not be expressed or it is broken, laparotomy and, sometimes, amputation of the oviduct in the only recourse (4). There are no current indications to justify a hysterectomy in the normal periovulatory bird (3). Two kinds of surgical methods (Hysterotomy and Hysterectomy) can be performed for the treatment of the egg binding. Hysterotomy is indicated for removal of retained eggs (not prolapsed), egg shells, or for biopsy and cultures. A left lateral or midline incision with a flap is the preferred approach for best exposure. Hysterectomy (spay) is indicated for chronic egg laying, recurrent egg binding and oviductal disease (3, 4). Hysterectomy is recommended for permanent control of these problems. Hysterectomy has not been used commonly as a preventative measure, in part because of concerns about surgical risk, especially with traditional surgical methods (3, 7). Endoscopic salpingohysterectomy in juvenile cockatiels could be used to prevent future reproductive problems (7). We performed hysterectomy through midventral incision under the general anesthesia.

Although general anesthesia and surgical operations are risky, they can be successfully performed in cases when medical and non-surgical applications fail to yield the desired results.

References

1. **Cooper, J.E.:** Breeding Problems. In: Beynon PH, Forbes NA, Lawton MPC (Eds): BSAVA Manual of Psittacine Birds. British Small Animal Veterinary Association, Gloucestershire, 1996, 98-204.
2. **Doolen, M.D.:** Straining and reproductive disorders. In: Olsen GH, Orosz SE (Eds): Manual of Avian Medicine. Mosby St Louis MO, 2000, 47-61.

3. **Harrison, G.J.:** Selected Surgical Procedures. In: Harrison GJ, Harrison LR (Eds): Clinical Avian Medicine and Surgery Including Aviculture. W.B. Saunders Company, Philadelphia, 1986, 577-595.
4. **Hasholt, J.:** Reproductive Diseases in Cage Birds. J Small Anim Pract, 1966, 7(4): 313-320.
5. **Joyner, K.L.:** Theriogenology. In, Ritchie BW, Harrison GJ, Harrison LR (Eds): Avian Medicine: Principles and Application. Wingers Publishing Lake Worth FL, Philadelphia, 1994, 748-804.
6. **Matos, R., Morrisey, J.K.:** Emergency and Critical Care of Small Psittacines and Passerines. Seminars in Avian and Exotic Pet Medicine, 2005, 14(2): 90-105.
7. **Pye, G.W., Bennett, R.A., Plunske, R., Davidson, J.:** Endoskopie Salpingohysterectomy of Juvenile Cockatiels (*Nymphicus hollandicus*). Journal of Avian Medicine and Surgery, 2001, 15(2): 90-94.
8. **Quesenberry, K.E., Hillyer, E.V.:** Supportive care and emergency therapy. In, Ritchie BW, Harrison GJ, Harrison LR (Eds): Avian Medicine: Principles and Application. Wingers Publishing Lake Worth FL, Philadelphia, 1994, 382-416.
9. **Reece, R.L.:** Reproductive Diseases. In: Burr EW (Ed): Diseases of Cage Birds. T.F.H. Publications INC., NJ, 1987, 89-100.
10. **Romagnano, A.:** Care of the Critically Ill Breeding Hen. In: Ramon Noegel (Ed): Proceedings of the International Aviculturists Society 2003, 123-127.
11. **Rupley, A.E.:** Critical care of pet birds: procedures, therapeutics, and patient support. Vet. Clin. North Am. Exotic Animal Practice, 1998, 1(1): 11-41.
12. **Steel, E., Hinde, R.A.:** Influence of photoperiod on PMSG-induced nestbuilding in canaries. J Reprod Fertil, 1972, 31: 425-431.