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CASE REPORT

Penile Prolapse in a Pekin Duck (Anas platyrhynchos domesticus)

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ABSTRACT

In this case, a 7-month-old male, Pekin duck with the prolapsed phallus was presented. As a result of physical examination, amputation was decided due to the excessive necrotic areas on the phallus. The amputation process was performed on cut mode with electrosurgical monopolar cautery. Tissues were checked for hemorrhage and no evidence of bleeding was found. After the amputation process was completed, topical antibiotic were applied to the basic part of the phallus and the remained tissue was replaced into the cloaca. At the end of the first postoperative day, no clinical abnormalities were observed, and duck started to eat normally. In conclusion, amputation of prolapsed phallus may be accomplished by electracuatery. However postoperative care is important to prevent complications such as abscess.

Key Words: Amputation, Duck, Electrocautery, Phallus, Prolapse.

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Bir Pekin Ördeğinde Penil Prolapsı (Anas platyrhynchos domesticus)

ÖZ

Bu vakada fallus prolapsı olan 7 aylık bir erkek Pekin ördeği sunulmuştur. Yapılan fizik muayene sonucunda fallustaki aşırı nekrotik alanlar nedeniyle amputasyona karar verildi. Ampütasyon işlemi kesme modundaki monopolar elektrocerrahi koter ile gerçekleştirildi Operasyon sonrası dokular kanama açısından kontrol edildi ve kanama bulgusuna rastlanılmadı. Ampütasyon işlemi tamamlandıktan sonra fallusun kök kısmına topikal antibiyotik uygulandı ve kalan doku kloakaya reddedildi. Postoperatif ilk günün sonunda klinik anormallikler gözlenmedi ve ördek normal yemeye başladı. Sonuç olarak, prolabe fallusun amputasyonu elektrokoter yöntem ile gerçekleştirilebilir. Ancak apse gibi komplikasyonları önlemek için postoperatif bakım önemlidir.

Anahtar Kelimeler: Amputasyon, Elektrokoter, Fallus, Ördek, Prolaps

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INTRODUCTION

The genitals of birds are extremely diverse, especially in waterfowls. Birds are the animals with the most different genital organ morphology among the amniotic species (Brennan et al. 2008, Briskie et al. 1997, McCracken et al. 2001). Few of the avian species have a penis (Gilbert et al. 1979). Only 3% of all bird species have a phallus or intromittent organ, and all of these species are members of the basal lineage of surviving birds (Briskie et al. 1997, Jamieson and Barrie 2011). At rest, the penis is held inverted (from outside to inside) within the phallic sac (saccus phallic) in the ventral wall of the cloaca. Unlike other amniotes, the erectile mechanism of the bird's penis is lymphatic rather than vascular. During eversion, lymph accumulates in two lymphatic spaces at the base of the cloaca and enters a lymphatic lumen inside the penis forcing it out of the phallic sac (Brennan et al. 2010). There is no erection before mating in males in waterfowl. Rather, intromission is accomplished by the evolution of the penis into the female reproductive tract. The erect penises of mammals and turtles are rigid hydrostats supported by axial-orthogonal layers of non-elongated collagen fibers. Unlike mammals and turtles, the penis of waterfowl is flexible when erect, suggesting that the collagen fibers will not be arranged in axial orthogonal arrays (Babinski et al. 2005, Kelly 2002).

Partial and complete phallic prolapse is possible in birds with a large phallus and is usually secondary to local infection, trauma, and extreme weather changes. Excessive sexual desire and copulation, fecal contamination, and Neisseria spp. have been reported as causes of phallic infections (Krautwald et al. 2008). A prolapsed phallus can enlarge as well as become ulcerated and exacerbate the problem. The treatment includes that; if the tissue is thought to be still alive, the organ should be reduced in size and rejected. Before the phallus shrinks, it should be cleaned with dilute chlorhexidine and saline. For reposition, it is recommended to reduce the size of the phallus and apply a 50% dextrose solution to the phallus. The prolapsed phallus should be cleaned and necrotic tissues should be carefully debrided before applying reposition. Topical antibiotic ointments, dimethyl sulphoxide, and systemic antibiotics may be beneficial. Partial closure of the cloaca (via matress or transcloacal suture) may be required to prevent a recurrence. Severe necrotic phallus may require surgical debridement. In case of the phallus is completely necrotic, total removing of the phallus tissue is recommended (Krautwald et al. 2008, Guzman 2016). The aim of this case report was to present the treatment of prolapsed phallus in a Pekin duck.

CASE HISTORY

A 7-month-old male Pekin duck was referred to Atatürk University Animal Hospital with the complaint of a mass under the abdomen. According to the information obtained from the patient's owner, the mass was repositioned and the suture was applied to the prepuce, but recurring was occurred. Its cause and how it occurred have not been fully reported by the patient owner. While no problems were observed in defecation and urination, there was a slight decrease in appetite. The prolapsed penis was approximately 8 cm long and the tissue integrity of the phallus was impaired. There were necrotic areas in the basis and body parts of the phallus and it had completely dried up and lost its vitality (Figure 1). As a result of physical examination, amputation was decided due to the excessive necrotic areas on the phallus. Sedation was achieved with 0.2 mg/kg i.m. diazepam (10 mg/2ml Deva, Turkey). 1 to 2 l/min of pure oxygen with a concentration of 7% sevoflurane (250 ml sevorane Liquid Abbott, Istanbul, Turkey) were administered with the oxygen mask for induction. After the induction, maintenance was provided with 200 ml/kg oxygen and 4-5% sevoflurane. Our patient was placed in the dorsoventral position the prolapse phallus was cleaned with 0.5% chlorhexidine. The amputation process was performed on cut mode with electrosurgical monopolar cautery (EK160, Üzümcü, Ankara, Turkey). Lymphatic cisterns extending to the right and left (cisterna lymphatica basis phalli) fibrocartilage tissue of the phallus were cauterized without bleeding. The corpus part of the phallus was removed together with the glandular and cutaneous phallus sacs. Tissues were checked for hemorrhage and no evidence of bleeding was found (Figure 2). The necrotic phallus was successfully removed (Figure 3). After the amputation process was completed, topical Terramycin eye pomade 3.5 g (Pfizer, Istanbul) and 1% Silverdin (Deva Holding, Istanbul) were applied to the basic part of the phallus and the remained tissue was replaced into the cloaca. 150 mg/kg amoxicillin and 1 mg/kg meloxicam were prescribed to intramuscular for five postoperative days. At the end of the first postoperative day, no clinical abnormalities were observed, and duck started to eat normally. Although it was informed that no complications were informed by the owner on the 14th day following the surgery, the swelling and abscess were reported in the amputated penile tissue at the 1 month follow-up. After the abscess formation, duck was taken to another veterinary hospital and subjected to a medical treatment and was reported to be healthy at posoperative 2 month interview.

Figure 1. Pre-operative necrotic prolapsed phallus

Figure 2. The amputation process was performed with an electrosurgical monopolar cautery pen

Figure 3. Postoperative removed the necrotic phallus

DISCUSSION AND CONCLUSION

A prolapsed phallus due to frostbite in ostriches has been reported (Krautwald et al. 2008, Ritchie 1994). Birds with severe prolapse and infection can become significantly depressed and often lose interest in mating (Krautwald et al. 2008). In presented case, no decrease in sexual desire was informed. Once the phallus prolapsed, the organ can dry out and become necrotic if not repositioned (Krautwald et al. 2008, Guzman 2016). The prolabed part of the phallus is cleaned with antiseptic solutions, and after the repositioning is achieved, the purse string suture is

placed over the cloaca (Ritchie 1994). In our case recuring of the prolapsed phallus was detected after the purse string suture. Necrotized phallus tissue was also noted in this case, so this tissue was extirpated with electrocautery. Previous reports have also stated that phallus should be removed if it is necrotic (Krautwald et al. 2008, Ritchie 1994). In conclusion, amputation of prolapsed phallus in ducks may be accomplished by electracautery. However, postoperative care is important to prevent complications such as abscess.

Ethics Committee Information: An ethics committee document is not required for this study.

Conflict of interest: The authors declare that there is no actual, potential or perceived conflict of interest for this article.

REFERENCES

Brennan PL, Birkhead TR, Zyskowski K, Van Der Waag J, Prum RO. Independent evolutionary reductions of the phallus in basal birds. Journal of Avian Biology. 2008; 39(5): 487-92.

Briskie JV, Montgomerie R. Sexual selection and the intromittent organ of birds. Journal of Avian Biology. 1997; 28: 73-86.

McCracken KG, Wilson RE, McCracken PJ, Johnson KP. Are ducks impressed by drakes' display?. Nature. 2001; 413(6852): 128-128.

Gilbert AB, King AS, and J. McLelland. Form and function in birds. Volume 1, Academic Press, Cambridge, UK. 1980; pp. 237-360.

Jamieson, Barrie GM. Reproductive biology and phylogeny of birds. 1st edition, CRC Press, Florida, USA. 2011; pp. 1-115.

Brennan PL, Christopher JC, Richard OP. Explosive eversion and functional morphology of the duck penis supports sexual conflict in waterfowl genitalia. Proceedings of the Royal Society B: Biological Sciences. 2010; 277(1686): 1309-1314.

Babinski M, deBrito-Gitirana L, Chagas M, Figueiredo MA, Costa W, Sampaio F. Immunohistochemical analysis of smooth muscle cells and volumetric density of the elastic system fibers of wild boar (Sus scrofa) penis. Animal reproduction science. 2005; 86(3-4): 317-28.

Kelly D. The functional morphology of penile erection: tissue designs for increasing and maintaining stiffness. Integrative and Comparative Biology. 2002; 42(2): 216-21.

Krautwald M, Orosz SE, T Tully Jr. Essentials of avian medicine and surgery. 3rd edition, John Wiley & Sons, New York, USA. 2007; pp. 124-208.

Guzman DSM. Avian soft tissue surgery. Veterinary Clinics: Exotic Animal Practice. 2016; 19(1): 133-157.

Ritchie BW. Avian medicine principles and application. Wingers Publishing, Florida, USA. 1994; pp. 1096-1132.