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CASE REPORT

Penile Prolapse in A Red Eared Slider *(Trachemys scripta elegans)* [1]

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Summary

Male tortoises are occasionally presented with a prolapsed phallus (penis). The male chelonian has a single phallus, which protrudes from the floor of the proctodeum. Unlike the mammalian penis, the chelonian phallus is not involved in urination. The penis is retracted except during mating, trauma, or death; it lies in the ventral floor of the cloaca. A 5-year-old, male turtle constituted the study material. Clinically, extensive necrotic areas and, black and dark purple tissues in the phallus were observed. The usual treatment for a necrotic phallus in turtles is to perform surgery to completely remove the necrotic tissue. After the general anesthesia and analgesia, phallus amputation was achieved by placing transfixation sutures around the base of the phallus. Urination and defecation returned to normal within 24 hours after amputation and feeding was started at the second day. As a conclusion, amputation was emphasized as an effective method for treatment of necrotic phallus.

Keywords: *Amputation, Penis prolapse, Phallus, Red eared slider*

Kırmızı Yanaklı Su Kaplumbağasında *(Trachemys scripta elegans)* Penis Prolapsusu

Özet

Erkek kaplumbağalarda phallus (penis) prolapsusu nadiren görülür. Erkek kaplumbağaların, proctodeum'un tabanından köken alan tek bir phallus'ları vardır. Memelilerdekinin tersine kaplumbağaların phallus'ları, ürinasyon işlevi görmez. Penis çiftleşme, travma veya ölüm haricinde kloakanın ventral yüzeyinde retrakte bir şekilde uzanır. Beş yaşlı, erkek, kırmızı yanaklı su kaplumbağası çalışma materyalini oluşturdu. Klinik olarak phallus'ta yaygın nekrotik alanlar ile siyah ve koyu mor dokular gözlendi. Kaplumbağalarda nekrotik phallus'un sağaltımında genellikle nekrotik dokuların tamamen uzaklaştırılması gerekir. Sağaltımda genel anestezi ve analjeziyi takiben phallus'un etrafına yerleştirilen transfikzasyon dikişini takiben phallus amputasyonu gerçekleştirildi. Amputasyon sonrası 24 saat içerisinde ürinasyon ve defekasyon normale döndü ve olgu ikinci gün beslenmeye başladı. Sonuç olarak nekrotik phallus'un sağaltımında amputasyonun etkili bir yöntem olduğu vurgulanabilir.

Anahtar sözcükler: *Amputasyon, Kırmızı yanaklı su kaplumbağası, Penis prolapsusu, Phallus*

INTRODUCTION

Male chelonians have a single phallus. This structure, like the hemipenes of lizards and snakes, serves a single function as a copulatory organ. The chelonian phallus is not involved in urination [1,2].

There are a number of different suspected etiologies for this presentation (e.g., arousal, hypocalcemia, trauma, foreign body obstruction, and cystic calculi), although most cases go undiagnosed [1,3].

Once prolapsed, the organ can become desiccated and necrotic if it is not reduced. In cases where an animal

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presents with a prolapsed phallus, attempts should be made to assess the status of the organ, determine its viability, and consider whether the organ should be reduced or amputated. In cases where the tissue is still considered viable, the organ should be reduced. Before being reduced, the phallus should be cleaned with dilute chlorhexidine (0.5%) and saline. To reduce the size of the phallus for replacement, it's recommended to liberally irrigate the phallus with 50% dextrose solutions. Once the organ is reduced to a size that will allow it to be reduced, it should be rinsed, removing the dextrose, and replaced to the floor of the cranial base of the tail. To reduce the possibility of the phallus reprolapsing, two interrupted using a nonabsorbable sutures can be placed through the vent. It is important to place the sutures at a distance that prevents reprolapse of the phallus without affecting the animal's ability to defecate or urinate [1]. In cases where the phallus is determined to be necrotic, it should be removed. Phallus amputation can be achieved by placing sutures around the base of the phallus. Once removed, the base of the phallus can be replaced into the cranial base of the tail [1,4].

The purpose of this report is to present our experience with the amputation of the necrotic phallus in a red eared slider.

CASE HISTORY

A five-year-old, male, red eared slider *(Trachemys scripta elegans)* was presented with extensive necrotic areas and, black and dark purple tissues in the phallus *(Fig. 1)*. The owner reported that the phallus was prolapsed when it was mating five days ago. The case was reported to have decreased apetite until the last two days. There was no problem on defecation and urination. The prolapsed penis was approximately 8 cm in lenght and there was no tissue sensitivity.

Carprofen (2 mg/kg, IM) (Rimadyl® 50 mg/ml, Pfizer, Zaventem, Belgium) was injected to turtle once just before the operation as analgesic. Once the tortoise was stable and ready for surgery it was gently induced with an isoflurane (Forane, Abbott, Istanbul, Turkey) concentration of 3% in O_2 by mask. When fully relaxed, an uncuffed endotracheal tube (2.0 mm ID) gently inserted. The chelonian glottis is located at the caudal aspect of the fleshy tongue and is easy to visualize with gentle finger pressure in the intermandibular space. After the tube was inserted isoflurane anaesthesia was maintained at 1-2% using a low-flow, semi-closed circuit at an oxygen flow rate of 500 mL/kg/min. The righting reflex was lost first, followed by the tail- and toe-pinch when a surgical plane of anesthesia was reached. After anesthesia, the tortoise was placed in dorsal recumbency and the prolapsed phallus was cleaned thoroughly. Phallus amputation achieved by

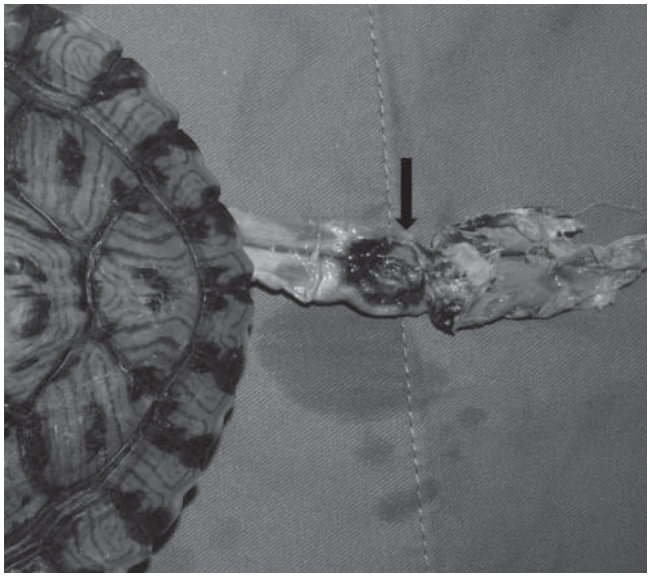

Fig 1. Preoperative appearance of necrotic phallus (black arrow)
Şekil 1. Nekrotik fallusun operasyon öncesi görünümü (siyah ok)

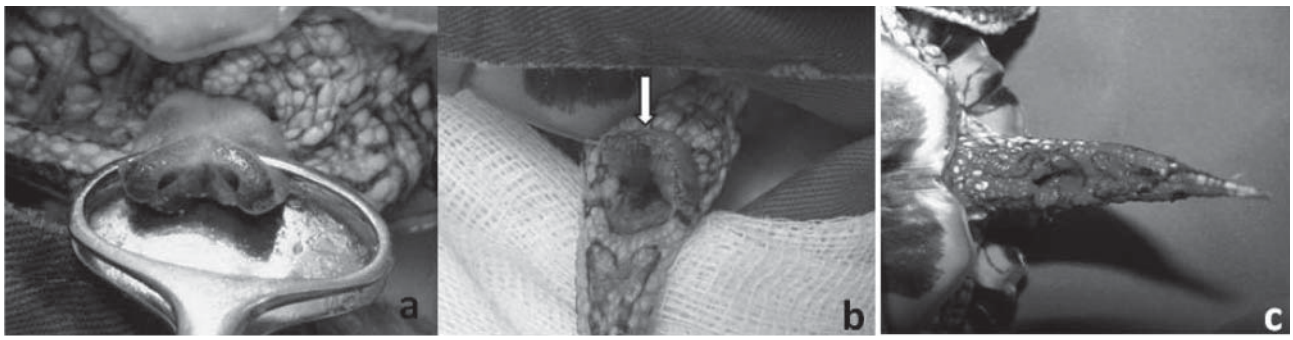

Fig 2. The appearance of phallus after all of the necrotic tissues were removed **(a)**, The intact phallus tissue was sutured (white arrow) **(b)**, The base of the phallus was replaced into the cranial base of the tail **(c)**

Şekil 2. (a) Tüm nekrotik dokular uzaklaştırıldıktan sonra fallusun görünümü, **(b)** Sağlam fallus dokusuna dikiş uygulanması (beyaz ok), **(c)** Fallusun kaidesi, kuyruğun kranial kaidesi içine doğru yerleştirildi

placing transfixation sutures (3/0, polypropylene) around the base of the phallus. All of the necrotic tissues were removed *(Fig. 2a)* and, the remaining intact tissues were sutured *(Fig. 2b* and than the base of the phallus was replaced into the cranial base of the tail *(Fig. 2c)*. 10 mg/kg dose of *enrofloxacin* (Baytril-K 5%, Bayer, Istanbul, Turkey) given intramuscularly, *once a day* for 5 days after the operation.

Urination and defecation returned to normal within 24 h after amputation and feeding was started at the second day.

DISCUSSION

Phallus, like the hemipenes of lizards and snakes, serves a single function as a copulatory organ [1]. The genital papilla elongates into the penis during maturation. The penis is retracted except during mating, trauma, or death; it lies in the ventral floor of the cloaca [3]. The turtle's phallus was prolapsed during mating as reported by researchers in the study case.

In cases where an animal presents with a prolapsed phallus, attempts should be made to assess the status of the organ, determine its viability, and consider whether the organ should be reduced or amputated [1]. When the turtle was brought to our clinic, it's phallus was seen to have extensive necrotic areas and, black and dark purple tissues and it was cold. Therefore, it was *decided that* amputation was required.

Although it is sometimes difficult to assess and evaluate pain in the reptilian patient, there is no reason to believe that the lack of more familiar responses to pain such as vocalization and so forth is equivalent with no pain sensation. Routine administration of analgesics to any reptile that undergoes invasive or painful surgery is recommended. Although no information is available on drugs and doses, the higher end of the dose range recommended for mammalian species is commonly used [5]. Carprofen was administered preoperatively for the prevention of *pain.* It administered at a dose of 2 mg/kg intramuscularly as stated by the researchers [1]. In most reptiles endotracheal intubation is easily achieved and can be performed either after a sedative dose of an injectable agent or after mask induction. In chelonians the tracheal rings are complete, and care should be taken not to overinflate the cuff, which may cause damage to the thacheal mucosa [1,5]. Isoflurane was administered via face mask and than an uncuffed endotracheal tube (2.0 mm ID) was used for intubation in present study. In reptiles weighing less than 10 kg the use of a non-rebreathing system has the advantage of little resistance and minimal dead space [1,5-7]. We used semi-closed circuit system for anesthesia and there was no problem during the anesthesia.

In cases where the phallus is determined to be necrotic, it should be removed [1,3,4]. It is important to remove all of the necrotic tissues to prevent the dissemination of necrotic thromboemboli [1]. All of the necrotic tissues were removed in this case. Each ureter enters the cloaca with a gonadal duct via a urogenital papilla in the urodeum portion of the cloaca in turtles [2]. Therefore, the turtle's phallus is not involved in urination [1,2]. In this case, urination returned to normal within 24 hours following amputation. Anesthesia and edema may have affected the urination.

This case report describes the successful outcome of amputation of necrotic phallus.

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