Penis Prolapse in a Red-Eared Slider (*Trachemys Scripta Elegans*)

Rahime YAYGINGUL[1,a,*], Busra KIBAR[1.b], İbrahim SUNER[1.c], Sila SARI[1.d]

[1]Adnan Menderes University, Veterinary Faculty, Department of Surgery, Aydin, Turkey
[a]ORCID: 0000-0001-7402-9031, [b]ORCID: 0000-0002-1490-8832, [c]ORCID: 0000-0003-4711-880X, [d]ORCID: 0000-0002-1758-6322

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Abstract: This study aimed to evaluate the treatment outcomes of a rare occurrence of penis prolapse in a turtle. A 10-year-old terrapin (*Trachemys Scripta Elegans*), weighing 300 g, was brought to the Adnan Menderes University Faculty of Veterinary Medicine Surgery Clinics with complaints of blood stains in the area where it was found. The clinical examination revealed that a mass hung out of its anal area, and this mass was detected to the penis. The mucosal structure was alive and no necrotic tissues were observed. The turtle was anesthetized using an intramuscular administration of a combination of medetomidine and ketamine HCl. The penis was washed with antiseptic solutions, followed by a cold application and tissue rejection applications. The penis was then fixed to the mucosa using a tobacco-pouch suture. In this process, no complications relevant to urination and defecation were encountered. In conclusion, surgical intervention in penis prolapse case in this turtlewas found to besuccessful with no complications.
***Keywords*:** *Penis prolapse, Red-eared sliders.*

Kırmızı Yanaklı Su Kaplumbağasında (Trachemys Scripta Elegans) Penis Prolapsusu

Özet: Bu çalışmada, bir su kaplumbağasında nadir olarak görülen penis prolapsu olgusunun sağaltım sonuçlarının değerlendirilmesi amaçlandı. 10 yaşında ve 300 gr ağırlığındaki su kaplumbağası, bulunduğu bölgede kan lekelerinin görülmesi ile Adnan Menderes Üniversitesi Veteriner Fakültesi Cerrahi Kliniğine getirildi. Klinik muayenede anüs bölgesinde bir kitlenin dışarı sarktığı ve bu kitlenin penis olduğu kanısına varıldı. Mukoza yapısı canlı idi ve herhangi bir nekrotik doku ile karşılaşılmadı. Kaplumbağa kas içi medetomidine-ketamin HCI kombinasyonu uygulanarak anesteziye alındı. Penis antiseptik solüsyonlarla yıkandı ve ardından soğuk uygulama ile dokunun reddi yapılarak tütün kesesi dikişi ile penis mukozaya sabitleştirildi. Bu süreçte ürinasyon ve defakasyon ile ilgili herhangi bir komplikasyon ile karşılaşılmadı. Sonuç olarak, prolapsus penis olgularında yapılan cerrahi müdahale başarılıdır ve komplikasyonlara neden olmamaktadır.
***Anahtar Kelimeler**: Penis prolapsus, Kırmızı yanaklı su kaplumbağası.*

Introduction

Male turtles have a single penis (phallus) without a solid lumen. It consists of a double corpora cavernosa and a urethral groove, and this organ is not used for urination. Depending on the species, the colors may vary from pink to dark purple to black. Except for mating, trauma, or death, the penis is retracted on the ventral surface of the cloaca (Kirchgessner et al., 2008; Ojeh and Adetunji, 2008;). Penile prolapse is rarely seen in male turtles. Its causes include impaction of the cloaca with gastrointestinal foreign bodies, straining from intestinal parasites, nutritional secondary hyperparathyroidism, inflammation, infection, neurologic or traumatic defects involving the retractor penis muscles or cloacal sphincter, bladder, or cloacal uroliths and traction during copulation (Barten 2006; Norton 1994).

This case report aimed to evaluate the treatment outcomes of a rare occurrence of penis prolapse in a turtle.

Case History

A 10-year-old water turtle (*Trachemys Scripta Elegans*), weighing 300 g, was brought to Adnan Menderes University Veterinary Faculty Department of Surgery because of blood stains in the area where it was found. Physical examination revealed a mass protruding from the cloaca that was later concluded to be the penis. The condition was diagnosed as a penis prolapse (Figure 1 A-B). As this case was only 1 day old, the mucosal structure remained alive and no necrotic tissue was encountered. No general condition impairment or other clinical abnormalities were found to pose a risk to general anesthesia. A combination of medetomidine (0.2 mg/kg, Domitor, Pfizer, Turkey) and ketamine HCl (10 mg/kg, Alfamine, Ege Vet, Turkey) was administered intramuscularly for anesthesia. The penis was washed with antiseptic solutions, followed by cold application, and the prolapsed penis was rejected (Figure 2 A-B) to its normal anatomical position into the cloaca using a tobacco-pouch (3/0 absorbable) suture (Figure 3 A-B). Enrofloxacin (10 mg/kg intramuscular) was administered for 10 days during postoperative care. In this process, no complications were encountered relevant to feed intake, urination, and defecation.

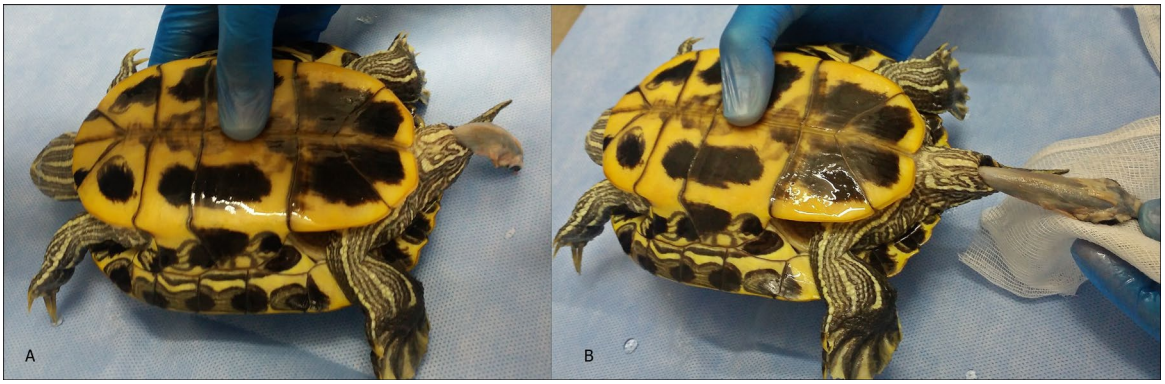

Figure 1. A-B) Preoperative appearance of prolapsed penis.

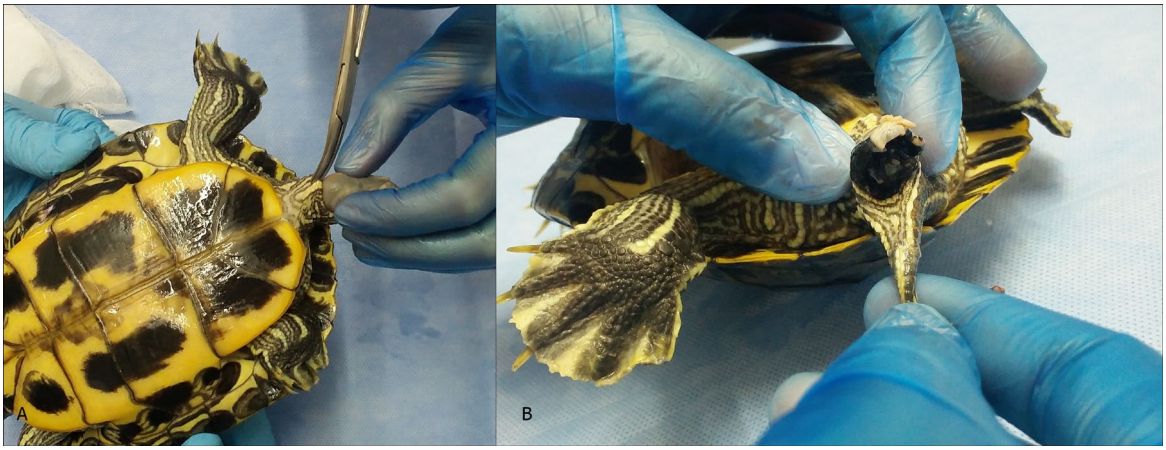

Figure 2. A-B) The prolapsed penis was rejected.

Discussion and Conclusions

Penile prolapse may occur in snakes and lizards but is rarely seen in chelonians (Barten 2006; Norton 1994). Penile prolapses may occur due to infection, forced separation during copulation, inflammation, nutritional secondary hyperparathyroidism, neurologic or traumatic defects involving the retractor penis muscles or cloacal sphincter, straining from intestinal parasites, and impaction of the cloaca with gastrointestinal foreign bodies (Barten, 2006; Innıs, 2002; Korkmaz et al. 2014; Martinez-Jimenez and Hermandez-Divers 2007; Nisbet et al., 2011; Norton 1994). According to the owner's history in the present case, this condition might have happened after mating.

Previous reports emphasized that turtles experienced uncomplicated anesthesia with propofol/isoflurane, alfaxolon/isoflurane or tiletamine/zolazepam, and isoflurane combinations or medetomidine/ketamine combination (Korkmaz et al., 2014). A combination of medetomidine (0.2 mg/kg) and ketamine HCl (10 mg/kg) was administered in the present case. No complication was experienced during anesthesia administration.

Penis prolapse should be repaired as soon as possible to save the organ. In the treatment, prolapse can be prevented by reducing the edema and fixing using tobacco-pouch or horizontal sutures after cleaning and lubrication. Previous studies have reported the use of cold application (Barten 2006a; Norton 1994; Podhade and Harne 2014; Silva et al. 2013), hypertonic saline (Barten 1996a; Bennett 2005; Boyer 1998) and granulated sugar to decrease edema (Doğu et al., 2015). In the present case, edema was controlled with a cold antiseptic solution (povidone-iodine). Prolapsed organ should be amputated by applying ligation from the base of the penis in cases where the organ is necrotic (Norton 1994; Boyer 1998; Barten 1996; Barten 2006a; Korkmaz *et al.,* 2014; Nisbet et al., 2011; Ojeh and Adetunji 2008). Since the penile tissue in the present case was alive, the organ was rejected and a tobacco-pouch suture (3/0 absorbable) was applied to the cloaca.

Several previous studies recommended the use of antibiotics in penile prolapse cases for 3 weeks (Innıs and Boyer 2002; Korkmaz et al., 2014, Nisbet

et al., 2011). Enrofloxacin (10 mg/kg, intramuscular) was also applied for 10 days in this study. During the postoperative period, no problems were encountered in terms of feed intake, urination, or defecation.

In conclusion, surgical intervention was found to be successful in penis prolapse cases and to cause no complications.

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***Corresponding author**: Rahime YAYGINGÜL
Aydın Adnan Menderes Üniversitesi Veteriner Fakültesi Cerrahi Anabilim Dalı, 09016, Işıklı/Aydın
e-mail: ryaygingul@adu.edu.tr