

Case Report

Congenital Phimosis in Scottish Fold Kitten

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Abstract

Phimosis is usually result from congenital anomaly, trauma, and prepuce or penis tumor. The present case explained the occurrence of congenital phimosis in a 3 month male Scottish Fold Kitten. The kitten was presented with the history of oliguria and urinary incontinence. In physical examination, preputial swellings without urine discharge were observed. Other Clinical parameters, biochemical and complete blood count results were normal. The surgical treatment as the solve method for correction the phimosis, was done under general anesthesia and the little full thickness skin fold was removed from apex of prepuce. The skin and mucosa were opposed together with a simple interrupted suture pattern. The patient was followed for 1 month, after surgery, and there was no recurrence or post operation complication. Phimosis is reported in many animal species, but the most affected animal are dogs. There are few reports about feline phimosis, but no congenital cases were reported in Scottish Fold breed.

KEYWORDS

Penile Diseases, Scottish Fold, Kitten

INTRODUCTION

Phimosis has been recorded in most domestic species. (Vadalia *et al.*, 2014) Some sources define it as an inability to protrude the penis from prepuce because of a stenotic or an absent preputial orifice however, another definition is simply the inability to protrude penis from prepuce. (Bright and Mellanby, 2004; Kahn, 2006; Fossum, 2018) Other common cause of phimosis, is an accumulation of debris (uroliths or preputial hair) at the preputial orifice. It can be congenital anomaly or arise in life time from preputial tumor and other trauma that affected around the penis. (Fossum, 2018) The congenital phimosis is documented in neonates, but it may undetected for several months. The incidence of phimosis is more in dogs than in cats, so there are a few reports about phimosis in cats and none of them is in the Scottish Fold breed. (Rawlings, 1984; Papazoglou and Kazakos, 2002; Bright and Mellanby, 2004; Saporito, 2008; May and Hauptman, 2009; Yoon and Jeong, 2013). However, some kittens with congenital phimosis may have suffered from severe preputial trauma secondary to exuberant and misdirected suckling from their littermates. Phimosis has been well described in Bulls, Boar and human. (Mulder, 1955; Neal, 1960; Agarwal *et al.*, 2005; Senna *et al.*, 2015) And also has recently seen in a newborn foal (Canisso *et al.*, 2020)

CASE HISTORY

A 3-month male Scottish Fold kitten, with a history of stranguria and dribble urine was presented to the Clinic of Kerman, Mehreghan Pet Clinic. The initial physical examination showed preputial swellings. and non-purulent fluid suspected to be urine was dripped from prepuce orifice. The palpation was not painful. The preputial opening was absent, and the penis was not seen as shown in Fig. 1. Distended bladder was palpated in abdominal palpation which was confirmed by ultrasonography. Other clinical and laboratory parameters were in normal limit. Based on the above evidence, type 1 phimosis was diagnosed, and the following measures were performed:

The kitten was peri medicated by injection of intramuscular Tramadol (1 mg/kg–5%), and Acepromazine (0.1 mg/kg –1%). The induction was done by intravenous injection of Ketamine (5 mg/kg–10%), and Midazolam (0.25mg/kg–1%) mixture. After intubation, Isoflurane (mac=1.2) was used as inhalation anesthetic for maintenance of anesthesia.

After induction, the kitten was placed in dorsal recumbency, and the inguinal region was shaved and scrubbed by Povidone-iodine 7.5% in tree time, and then was painted with Povidone-iodine 10%. Ceftriaxone (20 mg/kg - 500 mg) was used as preoperative antibiotic prophylaxis.



Fig. 1. Absence of preputial opening.

The penis was palpated gently, and 2 mm full thickness incision was done on prepuce, the urethral catheter was placed to avoid incidental injuries and urine collection as shown in Fig. 2. The primary incision was converted to round shape. The skin and mucosa were opposed together with a simple interrupted suture pattern (4-0 nylon) as seen in Fig. 3. Postoperative treatment was topical nitrofurazone ointment and intramuscular Ceftriaxone injection (20 mg/kg) for 3 days. An Elizabethan collar was used to prevent self-trauma. The patient was followed for 1 month, after surgery, and there was no recurrence or post operation complication.



Fig. 2. Full thickness incision and the urethral catheter placement.

RESULTS AND DISCUSSION

Dysuria and stranguria are common in affected animals. Urine will build up within the sheath and make preputial swelling. An abnormally small preputial orifice, resulting in inability to extrude the penis and mating problems. If the preputial opening is small-

er than normal size, dribble urine occurs. Urinary infection and balanoposthitis are the most common complication of phimosis (Sarierler and Kara, 1998; Bright and Mellanby, 2004; Fossum, 2018).



Fig. 3. A simple interrupted suture pattern to put tissues together.

Phimosis can be studied and classified from clinical (gross lesion) and etiological aspects. Two lesions are clinically significant: Swelling in the preputial area (general or focal) due to urinary accumulation, and penile-preputial adhesions (presence or absence). Accordingly, phimosis is divided into two types: in type 1 phimosis, general preputial swelling and absence of penile-preputial adhesions and in type 2 phimosis, we see focal swelling of the preputial and penile-preputial adhesions.(de Vlaming *et al.*, 2019) this case, as we mentioned before, is type 1.

Etiologically, if phimosis is resulted by trauma, infection or inflammation, the medical treatment and urethral catheter placement may be effective. In contrast, if phimosis is caused by tumor or in congenital cases, surgeries such as ureterostomy, preputioplasty, and circumcision are the best treatments.(May and Hauptman, 2009; Yoon and Jeong, 2013; Fossum, 2018; de Vlaming *et al.*, 2019; Bastos *et al.*, 2020; Fernandes *et al.*, 2021). Congenital phimosis has been described in young dogs, cats, and stallions and can result from developmental anomaly of penis or prepuce. Such anomalies include a short penis or retractor penis muscle, persistent adhesions connecting prepuce to penis, or stenosis or absence of preputial orifice (Noakes, 2009). In the presented case, phimosis and resultant urine burns to the preputial mucosa was surgically corrected by shortening the prepuce allowing normal extrusion of the penis and urination in a Scottish fold kitten. The patient was followed for 1 month after surgery and there was no recurrence or post operation complication.

CONFLICT OF INTEREST

No conflicts of interest have been declared

REFERENCES

- Agarwal, A., Mohta, A., Anand, R.K., 2005. Preputial retraction in children. *Journal of Indian Association of Pediatric Surgeons* 10, 89.
- Bastos, M.M.S., Pantoja, A.R., Everton, E.B., Carneiro, M.J.C., Aires, E.O.M., 2020. Circumcision posthioplasty for phimosis reduction in cat: Case report. *Medicina Veterinaria (Brazil)* 14, 113–116.
- Bright, S.R., Mellanby, R.J., 2004. Congenital phimosis in a cat. *Journal of Feline Medicine and Surgery* 6, 367–370.
- Canisso, I.F., Ellerbrock, R.E., Wilkins, P.A., 2020. Case Report Rapport de cas Congenital phimosis causing preputial swelling in a newborn foal. *Canadian Veterinary Journal* 61, 247–250.
- de Vlaming, A., Wallace, M.L., Ellison, G.W., 2019. Clinical characteristics, classification, and surgical outcome for kittens with phimosis: 8 cases (2009–2017). *Journal of the American Veterinary Medical Association* 255, 1039–1046.

- Fernandes, M.P., Martins, M.I.M., Greggi, J.R., Groth, A., Cardoso, G.S., Gomes, C.daC., Silva, V.W., Amaral, L.M. de S., Silva, N.R.da., 2021. Postioplastia circunferencial para correção de fimose congênita em gato: Relato de Caso. *Research, Society and Development* 10, e41010111882.
- Fossum, T.W., 2018. *Small Animal Surgery E-Book*. Elsevier Health Sciences. <https://books.google.com/books?id=kIBUDwAAQBAJ>
- Kahn, C.M., 2006. Blood parasites. *The Merck Veterinary Manual*, (Ninth Ed.), Merck, Co., Inc., Whitehouse Station, NJ.
- May, L.R., Hauptman, J.G., 2009. Phimosis in cats: 10 cases (2000--2008). *Journal of the American Animal Hospital Association* 45, 277–283.
- Mulder, J.B., 1955. Intermittent Preputial Diverticulum Phimosis in a Boar. *Iowa State University Veterinarian* 17, 11.
- Neal, F.C., 1960. Surgical Problems of the Penis and Prepuce of Bulls, Part II. *Iowa State University Veterinarian* 22, 5.
- Noakes, D. E., 2009. *Arthur's Veterinary Reproduction and Obstetrics - E-Book*. Elsevier Health Sciences. <https://books.google.com/books?id=wsN1DwAAQBAJ>
- Papazoglou, L.G., Kazakos, G.M., 2002. Surgical conditions of the canine penis and prepuce. *Compendium* 34, 204–218.
- Rawlings, C.A., 1984. Correction of congenital defects of the urogenital system. *The Veterinary Clinics of North América. Small Animal Practice* 14, 49–60.
- Saporito, K., 2008. challenging case: Phimosis in a young adult dog. *Veterinary Medicine* 103, 22-26.
- Sarierler, M., Kara, M.E., 1998. Congenital stenosis of the preputial orifice in a dog. *The Veterinary Record* 143, 201.
- Senna, N.A., Haithem, A.F., Shalaby, R.K.I., 2015. Some studies on feline genital system surgical affections (prevalence, histopathology and surgical interventions). *Acad. J. Anim. Dis.* 4, 60–68.
- Vadalia, J.V, Patel, A.M., Kumar, V., 2014. Surgical management of congenital phimosis in pup. *Intas Polivet* 15, 160–162.
- Yoon, H.-Y., Jeong, S., 2013. Surgical correction of a congenital or acquired phimosis in two cats. *Journal of Veterinary Clinics* 30, 123–126.